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 tagaggagcc accagtggaa aggaagaccc tccatcctct ggtattaacg ccttaatgcc  
 2580  
 cctgtctttt actgtaagtt acttaagatc atttttggaa gcaggcgtgg tagagtcctg  
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 2880  
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 2940  
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 3240  
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 3343

&lt;210&gt; 3072

&lt;211&gt; 349

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3072

Met	Leu	Glu	Arg	Arg	Cys	Arg	Gly	Pro	Leu	Ala	Met	Gly	Leu	Ala	Gln
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Pro	Arg	Leu	Leu	Ser	Gly	Pro	Ser	Gln	Glu	Ser	Pro	Gln	Thr	Leu	Gly
		20						25					30		
Lys	Glu	Ser	Arg	Gly	Leu	Arg	Gln	Gln	Gly	Thr	Ser	Val	Ala	Gln	Ser
		35					40					45			
Gly	Ala	Gln	Ala	Pro	Gly	Arg	Ala	His	Arg	Cys	Ala	His	Cys	Arg	Arg
	50					55				60					
His	Phe	Pro	Gly	Trp	Val	Ala	Leu	Trp	Leu	His	Thr	Arg	Arg	Cys	Gln
65				70					75					80	
Ala	Arg	Leu	Pro	Leu	Pro	Cys	Pro	Glu	Cys	Gly	Arg	Arg	Phe	Arg	His
		85						90					95		
Ala	Pro	Phe	Leu	Ala	Leu	His	Arg	Gln	Val	His	Ala	Ala	Ala	Thr	Pro
		100						105					110		
Asp	Leu	Gly	Phe	Ala	Cys	His	Leu	Cys	Gly	Gln	Ser	Phe	Arg	Gly	Trp

115	120	125
Val Ala Leu Val Leu His Leu Arg Ala His Ser Ala Ala Lys Arg Pro		
130	135	140
Ile Ala Cys Pro Lys Cys Glu Arg Arg Phe Trp Arg Arg Lys Gln Leu		
145	150	155
Arg Ala His Leu Arg Arg Cys His Pro Pro Ala Pro Glu Ala Arg Pro		
165	170	175
Phe Ile Cys Gly Asn Cys Gly Arg Ser Phe Ala Gln Trp Asp Gln Leu		
180	185	190
Val Ala His Lys Arg Val His Val Ala Glu Ala Leu Glu Glu Ala Ala		
195	200	205
Ala Lys Ala Leu Gly Pro Arg Pro Arg Gly Arg Pro Ala Val Thr Ala		
210	215	220
Pro Arg Pro Gly Gly Asp Ala Val Asp Arg Pro Phe Gln Cys Ala Cys		
225	230	235
Cys Gly Lys Arg Phe Arg His Lys Pro Asn Leu Ile Ala His Arg Arg		
245	250	255
Val His Thr Gly Glu Arg Pro His Gln Cys Pro Glu Cys Gly Lys Arg		
260	265	270
Phe Thr Asn Lys Pro Tyr Leu Thr Ser His Arg Arg Ile His Thr Gly		
275	280	285
Glu Lys Pro Tyr Pro Cys Lys Glu Cys Gly Arg Arg Phe Arg His Lys		
290	295	300
Pro Asn Leu Leu Ser His Ser Lys Ile His Xaa Ser Asp Pro Arg Gly		
305	310	315
Arg Pro Arg Pro Pro Pro Ala Arg Gly Ala Pro Ser Cys Gln Pro Ala		
325	330	335
Pro Arg Ser Pro Arg Pro Ser Pro Pro Arg Arg Tyr Leu		
340	345	

&lt;210&gt; 3073

&lt;211&gt; 791

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3073

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120  
gccggagggg ccggggcggg ggccgcgccc ggaccgcac tccccccacg ggggtcgggtg  
180  
cctggggatc ctgtccgcat ccaactgcaac atcacggagt catacctgc tgtgcccccc  
240  
atctggctcg tggagtctga tgaccctaac ttggctgctg tcttggagag gctgggtggac  
300  
ataaagaaag ggaataactct gctattgcag catctgaaga ggatcatctc cgacctgtgt  
360  
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420  
gagcagtgc cacaggaaga cgtgtcttca gaagatgaag atgaggagat gcctgaggac  
480  
acagaagact tagatcacta tgaaatgaaa gaggaagagc cagctgaggg caagaaatct  
540



gaagatgatg gcattggaaa agaaaacttg gccatcctag agaaaattaa aaagaaccag  
 600  
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 660  
 aaggagctcc agggatatat taccgnttca cagagtttca aaggcggaaa ctatgncagt  
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 791

<210> 3074

<211> 263

<212> PRT

<213> Homo sapiens

<400> 3074

Xaa	Pro	Cys	Leu	Arg	Arg	Glu	Leu	Lys	Leu	Leu	Glu	Ser	Ile	Phe	His
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Arg	Gly	His	Glu	Arg	Phe	Arg	Ile	Ala	Ser	Ala	Cys	Leu	Asp	Glu	Leu
			20					25					30		
Ser	Cys	Glu	Phe	Leu	Leu	Ala	Gly	Ala	Gly	Gly	Ala	Gly	Ala	Gly	Ala
		35					40					45			
Ala	Pro	Gly	Pro	His	Leu	Pro	Pro	Arg	Gly	Ser	Val	Pro	Gly	Asp	Pro
	50					55					60				
Val	Arg	Ile	His	Cys	Asn	Ile	Thr	Glu	Ser	Tyr	Pro	Ala	Val	Pro	Pro
65					70					75				80	
Ile	Trp	Ser	Val	Glu	Ser	Asp	Asp	Pro	Asn	Leu	Ala	Ala	Val	Leu	Glu
			85						90					95	
Arg	Leu	Val	Asp	Ile	Lys	Lys	Gly	Asn	Thr	Leu	Leu	Leu	Gln	His	Leu
			100					105					110		
Lys	Arg	Ile	Ile	Ser	Asp	Leu	Cys	Lys	Leu	Tyr	Asn	Leu	Pro	Gln	His
		115				120					125				
Pro	Asp	Val	Glu	Met	Leu	Asp	Gln	Pro	Leu	Pro	Ala	Glu	Gln	Cys	Thr
	130					135					140				
Gln	Glu	Asp	Val	Ser	Ser	Glu	Asp	Glu	Asp	Glu	Glu	Met	Pro	Glu	Asp
145					150					155				160	
Thr	Glu	Asp	Leu	Asp	His	Tyr	Glu	Met	Lys	Glu	Glu	Glu	Pro	Ala	Glu
			165					170					175		
Gly	Lys	Lys	Ser	Glu	Asp	Asp	Gly	Ile	Gly	Lys	Glu	Asn	Leu	Ala	Ile
			180					185					190		
Leu	Glu	Lys	Ile	Lys	Lys	Asn	Gln	Arg	Gln	Asp	Tyr	Leu	Asn	Gly	Ala
		195				200					205				
Val	Ser	Gly	Ser	Val	Gln	Ala	Thr	Asp	Arg	Leu	Met	Lys	Glu	Leu	Gln
	210					215					220				
Gly	Tyr	Ile	Thr	Xaa	Ser	Gln	Ser	Phe	Lys	Gly	Gly	Asn	Tyr	Xaa	Ser
225					230					235				240	
Ser	Asn	Ser	Trp	Asn	Asp	Ser	Leu	Tyr	Gly	Trp	Asp	Val	Gln	Leu	Leu
			245					250					255		
Lys	Val	Asp	Gln	Gly	Ser	Val									
			260												

<210> 3075

<211> 603

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3075

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120
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180
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240
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300
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360
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420
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480
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540
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600
ccg
603

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&lt;210&gt; 3076

&lt;211&gt; 201

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3076

```

Pro Leu Gly Gly Lys Asn Phe Leu Lys Lys Met Val Gly Lys Asn Pro
 1          5          10          15
Pro Pro Pro Pro Phe Phe Ser Pro Val Gly Ala Lys Lys Lys Asn
      20          25          30
Val Gly Pro Gln Lys Lys Lys Lys Lys Lys Lys Val Leu Gly Gly
      35          40          45
Gly Arg Phe Gly Gln Val His Arg Cys Thr Glu Lys Ser Thr Gly Leu
      50          55          60
Ala Leu Ala Ala Lys Ile Ile Lys Val Lys Asn Val Lys Asp Arg Glu
65          70          75          80
Asp Val Lys Asn Glu Val Asn Ile Met Asn Gln Leu Ser His Val Asn
      85          90          95
Leu Ile Gln Leu Tyr Asp Ala Phe Glu Ser Lys Ser Ser Phe Thr Leu
      100         105         110
Ile Met Glu Tyr Val Asp Gly Gly Glu Leu Phe Asp Arg Ile Thr Asp
      115         120         125
Glu Lys Tyr His Leu Thr Glu Leu Asp Val Val Leu Phe Thr Arg Gln
      130         135         140
Ile Cys Glu Gly Val His Tyr Leu His Gln His Tyr Ile Leu His Leu
145         150         155         160
Asp Leu Lys Pro Glu Asn Ile Leu Cys Val Ser Gln Thr Gly His Gln

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				165					170				175
Ile	Lys	Ile	Ile	Asp	Phe	Gly	Leu	Ala	Arg	Arg	Tyr	Lys	Pro
				180				185				190	
Lys	Leu	Lys	Val	Asn	Phe	Gly	Thr	Pro					
			195				200						

&lt;210&gt; 3077

&lt;211&gt; 1377

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3077

```

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60
acattctgaa gggaggcaag gaggcggact gagcgctccc aattggggag gatgctggtg
120
gtggaggtgg cgaacggccg ctccctggtg tggggagccg aggcggtgca ggccctccgg
180
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240
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300
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360
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660
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720
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780
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900
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960
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1020
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1080
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1140
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1200
cttgtttcaa agcacttatt ggctgtgttt ttgtagttac ctattttcac actgtgagct
1260

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tcccgagaat ggggcctggg ttgtattcat ctgttttcta cagggtttaa gtctcaggag  
1320

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1377

<210> 3078

<211> 310

<212> PRT

<213> Homo sapiens

<400> 3078

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Glu	Ala	Val	Gln	Ala	Leu	Arg	Glu	Arg	Leu	Gly	Val	Gly	Gly	Arg	Thr
			20					25					30		
Val	Gly	Ala	Leu	Pro	Arg	Gly	Pro	Arg	Gln	Asn	Ser	Arg	Leu	Gly	Leu
			35				40					45			
Pro	Leu	Leu	Leu	Met	Pro	Glu	Glu	Ala	Arg	Leu	Leu	Ala	Glu	Ile	Gly
			50			55					60				
Ala	Val	Thr	Leu	Val	Ser	Ala	Pro	Arg	Pro	Asp	Ser	Arg	His	His	Ser
65					70					75					80
Leu	Ala	Leu	Thr	Ser	Phe	Lys	Arg	Gln	Gln	Glu	Glu	Ser	Phe	Gln	Glu
				85				90						95	
Gln	Ser	Ala	Leu	Ala	Ala	Glu	Ala	Arg	Glu	Thr	Arg	Arg	Gln	Glu	Leu
			100					105					110		
Leu	Glu	Lys	Ile	Thr	Glu	Gly	Gln	Ala	Ala	Lys	Lys	Gln	Lys	Leu	Glu
			115				120					125			
Gln	Ala	Ser	Gly	Ala	Ser	Ser	Ser	Gln	Glu	Ala	Gly	Ser	Ser	Gln	Ala
			130				135				140				
Ala	Lys	Glu	Asp	Glu	Thr	Ser	Asp	Gly	Gln	Ala	Ser	Gly	Glu	Gln	Glu
145					150					155					160
Glu	Ala	Gly	Pro	Ser	Ser	Ser	Gln	Ala	Gly	Pro	Ser	Asn	Gly	Val	Ala
				165				170					175		
Pro	Leu	Pro	Arg	Ser	Ala	Leu	Leu	Val	Gln	Leu	Ala	Thr	Ala	Arg	Pro
			180					185					190		
Arg	Pro	Val	Lys	Ala	Arg	Pro	Leu	Asp	Trp	Arg	Val	Gln	Ser	Lys	Asp
			195				200					205			
Trp	Pro	His	Ala	Gly	Arg	Pro	Ala	His	Glu	Leu	Arg	Tyr	Ser	Ile	Tyr
			210				215					220			
Arg	Asp	Leu	Trp	Glu	Arg	Gly	Phe	Phe	Leu	Ser	Ala	Ala	Gly	Lys	Phe
225					230					235					240
Gly	Gly	Asp	Phe	Leu	Val	Tyr	Pro	Gly	Asp	Pro	Leu	Arg	Phe	His	Ala
				245					250					255	
His	Tyr	Ile	Ala	Gln	Cys	Trp	Ala	Pro	Glu	Asp	Thr	Ile	Pro	Leu	Gln
			260					265					270		
Asp	Leu	Val	Ala	Ala	Gly	Arg	Leu	Gly	Thr	Ser	Val	Arg	Lys	Thr	Leu
			275					280					285		
Leu	Leu	Cys	Ser	Pro	Gln	Pro	Asp	Gly	Lys	Val	Val	Tyr	Thr	Ser	Leu
			290				295					300			
Gln	Trp	Ala	Ser	Leu	Gln										
305					310										

<210> 3079

<211> 1785

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3079

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540ctatatgagg atgaggggtgt catccgctgc tacctagagg agctgctgca tattctgact  
600gatgcagacc ctgaagtttg caagaaaatg tgcaagagaa acgagttcga gtctgtcctg  
660gccttggttg cctattacca aatggaacac cgagcatcac tgcggctgct gtcctcaag  
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<400> 3080																
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Cys	Ser	Pro	Thr	Pro	Pro	Pro	Val	Pro	Arg	Arg	Gly	Thr	His	Thr	Thr	
			20					25					30			
Val	Ser	Gln	Val	Gln	Pro	Pro	Pro	Ser	Lys	Ala	Ser	Ala	Pro	Glu	Pro	
		35					40					45				
Pro	Ala	Glu	Glu	Glu	Val	Ala	Thr	Gly	Thr	Thr	Ser	Ala	Ser	Asp	Asp	
	50					55					60					
Leu	Glu	Ala	Leu	Gly	Thr	Leu	Ser	Leu	Gly	Thr	Thr	Glu	Glu	Lys	Ala	
65					70					75					80	
Ala	Ala	Glu	Ala	Ala	Val	Pro	Arg	Thr	Ile	Gly	Ala	Glu	Leu	Met	Glu	
				85				90						95		
Leu	Val	Arg	Arg	Asn	Thr	Gly	Leu	Ser	His	Glu	Leu	Cys	Arg	Val	Ala	
			100					105					110			
Ile	Gly	Ile	Ile	Val	Gly	His	Ile	Gln	Ala	Ser	Val	Pro	Ala	Ser	Ser	
	115					120						125				
Pro	Val	Met	Glu	Gln	Val	Leu	Leu	Ser	Leu	Val	Glu	Gly	Lys	Asp	Leu	
	130					135					140					
Ser	Met	Ala	Leu	Pro	Ser	Gly	Gln	Val	Cys	His	Asp	Gln	Gln	Arg	Leu	
145					150					155					160	
Glu	Val	Ile	Phe	Ala	Asp	Leu	Ala	Arg	Arg	Lys	Asp	Asp	Ala	Gln	Gln	
				165				170						175		
Arg	Ser	Trp	Ala	Leu	Tyr	Glu	Asp	Glu	Gly	Val	Ile	Arg	Cys	Tyr	Leu	
			180					185					190			
Glu	Glu	Leu	Leu	His	Ile	Leu	Thr	Asp	Ala	Asp	Pro	Glu	Val	Cys	Lys	
		195				200					205					
Lys	Met	Cys	Lys	Arg	Asn	Glu	Phe	Glu	Ser	Val	Leu	Ala	Leu	Val	Ala	
	210					215					220					
Tyr	Tyr	Gln	Met	Glu	His	Arg	Ala	Ser	Leu	Arg	Leu	Leu	Leu	Leu	Lys	
225					230					235					240	
Cys	Phe	Gly	Ala	Met	Cys	Ser	Leu	Asp	Ala	Ala	Ile	Ile	Ser	Thr	Leu	
				245				250						255		
Val	Ser	Ser	Val	Leu	Pro	Val	Glu	Leu	Ala	Arg	Asp	Met	Gln	Thr	Asp	
			260					265					270			
Thr	Gln	Asp	His	Gln	Lys	Leu	Cys	Tyr	Ser	Ala	Leu	Ile	Leu	Ala	Met	
		275				280					285					
Val	Phe	Ser	Met	Gly	Glu	Ala	Val	Pro	Tyr	Ala	His	Tyr	Glu	His	Leu	



290		295		300
Gly Thr Pro Phe Ala Gln Phe Leu Leu Asn Ile Val Glu Asp Gly Leu				
305		310		315
Pro Leu Asp Thr Thr Glu Gln Leu Pro Asp Leu Cys Val Asn Leu Leu				
	325		330	335
Leu Ala Leu Asn Leu His Leu Pro Ala Ala Asp Gln Asn Val Ile Met				
	340		345	350
Ala Ala Leu Ser Lys His Ala Asn Val Lys Ile Phe Ser Glu Lys Leu				
	355		360	365
Leu Leu Leu Leu Asn Arg Gly Asp Asp Pro Val Arg Ile Phe Lys His				
	370		375	380
Glu Pro Gln Pro Pro His Ser Val Leu Lys Phe Leu Gln Asp Val Phe				
385		390		395
Gly Ser Pro Ala Thr Ala Ala Ile Phe Tyr His Thr Asp Met Met Ala				
	405		410	415
Leu Ile Asp Ile Thr Val Arg His Ile Ala Asp Leu Ser Pro Gly Asp				
	420		425	430
Lys Gly Pro Phe Gly Ala Gly Gln Arg Pro Trp Pro Gly Val Pro Arg				
	435		440	445
Leu Leu Glu Pro Gly Ser Thr Pro Ser Arg Glu Pro His Pro Val Glu				
	450		455	460
Arg Ser Gly Val Pro Ala Leu Thr Ser Ser Trp Ala Ser Gly Cys Pro				
465		470		475
Arg Pro Leu His Pro Ala Leu Gln Leu Val Ile Asp Ser Ala Phe Gly				
	485		490	495
Gly Arg Ser Val				
500				

&lt;210&gt; 3081

&lt;211&gt; 1902

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3081

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1902

&lt;210&gt; 3082

&lt;211&gt; 414

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3082

Met	Asp	Asp	Met	Gly	Leu	Val	Ala	Lys	Ala	Cys	Gly	Cys	Pro	Leu	Tyr
1				5				10					15		
Trp	Lys	Gly	Pro	Leu	Phe	Tyr	Gly	Ala	Gly	Gly	Glu	Arg	Thr	Gly	Ser

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<210> 3083
<211> 610
<212> DNA
<213> Homo sapiens
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&lt;400&gt; 3083

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 120  
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 180  
 agcatcccgg gcaagcacta ccaggctgtg ggtctgcacc tctggaaggt agagaagcgg  
 240  
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 300  
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 360  
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 420  
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 gcagtggcca  
 610

&lt;210&gt; 3084

&lt;211&gt; 144

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3084

Xaa	Arg	Pro	Ser	Cys	Trp	Glu	Pro	Val	Arg	Pro	Ser	Gly	Ser	Ser	His
1				5					10					15	
Leu	Ser	Trp	His	Arg	Gly	Pro	Pro	Cys	Glu	Val	Tyr	Ile	Ala	Val	Leu
			20					25					30		
Gln	Arg	Ser	Arg	Leu	His	Ala	Ala	Asp	Trp	Ala	Gly	Arg	Ala	Arg	Ala
			35				40					45			
Leu	Val	Gly	Asp	Ser	His	Thr	Ser	Trp	Ser	Pro	Ala	Ser	Ile	Pro	Gly
			50				55				60				
Lys	His	Tyr	Gln	Ala	Val	Gly	Leu	His	Leu	Trp	Lys	Val	Glu	Lys	Arg
65					70					75					80
Arg	Val	Asn	Leu	Pro	Arg	Val	Leu	Ser	Met	Pro	Pro	Val	Ala	Gly	Thr
				85					90					95	
Ala	Cys	His	Ala	Tyr	Asp	Arg	Glu	Val	His	Leu	Arg	Cys	Glu	Leu	Ser
			100					105					110		
Pro	Gly	Tyr	Tyr	Leu	Ala	Val	Pro	Ser	Thr	Phe	Leu	Lys	Asp	Ala	Pro
			115					120					125		
Gly	Glu	Phe	Leu	Leu	Arg	Val	Phe	Ser	Thr	Gly	Arg	Val	Ser	Leu	Arg
			130				135						140		

&lt;210&gt; 3085

&lt;211&gt; 1080

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3085

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 60  
 cttctccaat aagaagatat tcagatattg tagtaccctg cttgttaatg gcagccattt  
 120  
 caaaagataa gaaaatggaa attaagggaa atctgttcag caacaaagat cttgaggaat  
 180  
 tatgcagaca tatcaacaac agaaaccaag cagcacagca ttctcagaag cagtctactg  
 240  
 agctcttcca gtgcatgtac ttcaaagaca aagaccctgc caccgaggag cgttgcatat  
 300  
 ctgacggagt tatttattca attagaacaa atgggtgtgct tctatttata ccaaggtttg  
 360  
 ggattaaagg tgctgcttat ctaaaaaata aagatggttt agtcatctca tgtggcccag  
 420  
 atagctgttc tgaatggaaa ccaggatccc ttcaacgatt tcaaaacaaa attacctcta  
 480  
 ctacaacaga tggggaatct gttacgttcc atttgtttga ccatgtaacc gtaagaatat  
 540  
 ccatacaggc ctcacgttgc cattctgata caatcagact tgaaataatt agtaacaaac  
 600  
 catacaagat accaaatata gaacttattc atcagagttc ccccttgctg aagagtgagt  
 660  
 tagtgaaaga agtaactaaa tctgtggaag aagctcagct tgcccaagaa gtcaaagtaa  
 720  
 acatcattca ggaggaatat caagaatate gccaaacaaa gggaaggagc ctatacacac  
 780  
 ttctagagga gatacgggac ctagctctcc tggatgtttc aaacaattat ggaatatgag  
 840  
 aggctcttac ttcactaaga gctgtcatat gtgaatgttt tacagtcttt tcaaacttaa  
 900  
 catttaatgt gtgtcactca gtgctctagt cgatcaggac tgggtagcta tttcgcatat  
 960  
 atgtanaatg ttctcagccg ggcacggtgg ctcacgcctg taaccccagc actttgggag  
 1020  
 gctgaggcgg gcggatcacg aggtcaggag attgagacca tcctggctaa cacggtgaaa  
 1080

&lt;210&gt; 3086

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3086

Met	Cys	Val	Thr	Gln	Cys	Ser	Ser	Arg	Ser	Gly	Leu	Gly	Ser	Tyr	Phe
1				5					10					15	
Ala	Tyr	Met	Xaa	Asn	Val	Leu	Ser	Arg	Ala	Arg	Trp	Leu	Thr	Pro	Val
			20					25					30		
Thr	Pro	Ala	Leu	Trp	Glu	Ala	Glu	Ala	Gly	Gly	Ser	Arg	Gly	Gln	Glu
		35				40						45			
Ile	Glu	Thr	Ile	Leu	Ala	Asn	Thr	Val	Lys						
	50						55								

&lt;210&gt; 3087

&lt;211&gt; 2329

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3087

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cgagagaggg agcactgtga cacggagggga gaggctgacg actttgatcc tgggaagaag  
120  
gtggaggtgg agccgcccc agatcggccca gtccgagcgt gccggacaca gcagccggaa  
180  
atggagcgca cccatattca gcaactcctg gaacacttcc tccgccagct tcagagaaaa  
240  
gatcccatg gattttttgc ttttcctgtc acggatgcaa ttgctcctgg atattcaatg  
300  
ataataaaac atcccatgga ttttggcacc atgaaagaca aaattgtagc taatgaatac  
360  
aagtcagtta cggaatttaa ggcagatttc aagctgatgt gtgataatgc aatgacatac  
420  
aataggccag ataccgtgta ctacaagttg gcgaagaaga tccttcacgc aggctttaag  
480  
atgatgagca aacaggcagc tcttttgggc aatgaagata cagctggtga ggaacctgtc  
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660  
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720  
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780  
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900  
gaagaaacaa agtcaccttt ctctccagtg ccactactgc gctttcgatg cagaataatt  
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1440



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 1620  
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 1680  
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<210> 3088

<211> 280

<212> PRT

<213> Homo sapiens

<400> 3088

Xaa	Glu	Lys	His	Leu	Asp	Asp	Glu	Glu	Arg	Arg	Lys	Arg	Lys	Glu	Glu
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Lys	Lys	Arg	Lys	Arg	Glu	Arg	Glu	His	Cys	Asp	Thr	Glu	Gly	Glu	Ala
			20					25					30		
Asp	Asp	Phe	Asp	Pro	Gly	Lys	Lys	Val	Glu	Val	Glu	Pro	Pro	Pro	Asp
		35					40					45			
Arg	Pro	Val	Arg	Ala	Cys	Arg	Thr	Gln	Gln	Pro	Glu	Met	Glu	Arg	Thr
	50					55					60				
His	Ile	Gln	Gln	Leu	Leu	Glu	His	Phe	Leu	Arg	Gln	Leu	Gln	Arg	Lys
65				70					75					80	
Asp	Pro	His	Gly	Phe	Phe	Ala	Phe	Pro	Val	Thr	Asp	Ala	Ile	Ala	Pro
			85					90					95		
Gly	Tyr	Ser	Met	Ile	Ile	Lys	His	Pro	Met	Asp	Phe	Gly	Thr	Met	Lys
			100					105					110		
Asp	Lys	Ile	Val	Ala	Asn	Glu	Tyr	Lys	Ser	Val	Thr	Glu	Phe	Lys	Ala
			115					120					125		
Asp	Phe	Lys	Leu	Met	Cys	Asp	Asn	Ala	Met	Thr	Tyr	Asn	Arg	Pro	Asp

130	135	140
Thr Val Tyr Tyr Lys Leu Ala Lys Lys Ile Leu His Ala Gly Phe Lys		
145	150	155
Met Met Ser Lys Gln Ala Ala Leu Leu Gly Asn Glu Asp Thr Ala Val		160
	165	170
Glu Glu Pro Val Pro Glu Val Val Pro Val Gln Val Glu Thr Ala Lys		175
	180	185
Lys Ser Lys Lys Pro Ser Arg Glu Val Ile Ser Cys Met Phe Glu Pro		190
	195	200
Glu Gly Asn Ala Cys Ser Leu Thr Asp Ser Thr Ala Glu Glu His Val		205
	210	215
Leu Ala Leu Val Glu His Ala Ala Asp Glu Ala Arg Asp Arg Ile Asn		220
225	230	235
Arg Phe Leu Pro Gly Gly Lys Met Gly Tyr Leu Lys Arg Asn Gly Asp		240
	245	250
Gly Ser Leu Leu Tyr Ser Val Val Asn Thr Ala Glu Pro Asn Ala Asp		255
	260	265
Glu Glu Glu Thr His Pro Val Thr		270
	275	280

&lt;210&gt; 3089

&lt;211&gt; 722

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3089

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120

gcccttaciaa aggcggcaga ggggtggatta tcttcacctg aattttcaga gctctgtatt  
180

tggttaggct ctcaaataaa atcattatgc aacttggaag aaagtatcac gtctgctggg  
240

agagatgacc tagagagctt ccagcttgag ataagtgggt ttttaaaaga gatggcctgt  
300

ccatactcgg tactcgtctc aggagacatt aaagagcgcc tcacaaagaa ggatgactgc  
360

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420

aaacataaaa attctcaatt agataaaaat agtgaagttt atcaggaagt tcaagctatg  
480

tttgatacac ttggtatacc caagtcaaca acttctgaca ttccgcatat gctaaaccaa  
540

gtggaatcaa aggtgaaaga tattctctca aagggtccaga aaaatcatgt gggaaaacca  
600

ctactgaaaa tggatttaaa ttcagaacag gcggaacaac tggaaagaat caatgatgct  
660

ctttcctgtg aatatgagtg ccgccgacga atgttaatga aacgattaga tgtgactgta  
720

ca

722

&lt;210&gt; 3090

<211> 240  
 <212> PRT  
 <213> Homo sapiens

<400> 3090  
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 Thr Ser Met Glu Gly Asp Val Leu Asp Thr Leu Glu Ala Leu Gly Tyr  
 20 25 30  
 Lys Gly Pro Leu Leu Glu Glu Gln Ala Leu Thr Lys Ala Ala Glu Gly  
 35 40 45  
 Gly Leu Ser Ser Pro Glu Phe Ser Glu Leu Cys Ile Trp Leu Gly Ser  
 50 55 60  
 Gln Ile Lys Ser Leu Cys Asn Leu Glu Glu Ser Ile Thr Ser Ala Gly  
 65 70 75 80  
 Arg Asp Asp Leu Glu Ser Phe Gln Leu Glu Ile Ser Gly Phe Leu Lys  
 85 90 95  
 Glu Met Ala Cys Pro Tyr Ser Val Leu Val Ser Gly Asp Ile Lys Glu  
 100 105 110  
 Arg Leu Thr Lys Lys Asp Asp Cys Leu Lys Leu Leu Leu Phe Leu Ser  
 115 120 125  
 Thr Glu Leu Gln Ala Leu Gln Ile Leu Gln Asn Lys Lys His Lys Asn  
 130 135 140  
 Ser Gln Leu Asp Lys Asn Ser Glu Val Tyr Gln Glu Val Gln Ala Met  
 145 150 155 160  
 Phe Asp Thr Leu Gly Ile Pro Lys Ser Thr Thr Ser Asp Ile Pro His  
 165 170 175  
 Met Leu Asn Gln Val Glu Ser Lys Val Lys Asp Ile Leu Ser Lys Val  
 180 185 190  
 Gln Lys Asn His Val Gly Lys Pro Leu Leu Lys Met Asp Leu Asn Ser  
 195 200 205  
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 210 215 220  
 Tyr Glu Cys Arg Arg Arg Met Leu Met Lys Arg Leu Asp Val Thr Val  
 225 230 235 240

<210> 3091  
 <211> 333  
 <212> DNA  
 <213> Homo sapiens

<400> 3091  
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 180  
 ctctttgact ccattctctg gttccctctt tctgctgcca gctccccga ctcttcctg  
 240  
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 333

<210> 3092  
 <211> 104  
 <212> PRT  
 <213> Homo sapiens

<400> 3092  
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 20 25 30  
 Ser Arg Lys Arg Glu Pro Arg Asp Gly Val Lys Glu Trp Gly Ser Gln  
 35 40 45  
 Ala Phe Ser Asn His Phe Gly Thr Leu Gly Arg Arg Gly Arg Pro Gly  
 50 55 60  
 Gly Thr Lys Gly Leu Gly Cys Ser Leu Ser Val Pro Asp Pro Cys Gln  
 65 70 75 80  
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 85 90 95  
 Phe Pro Ser Ala Pro Phe Thr Arg  
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<210> 3093  
 <211> 720  
 <212> DNA  
 <213> Homo sapiens

<400> 3093  
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 120  
 agggggcagc ctgtgggcag tgactctgtc tgtctttgga caggacaagg actgccatcc  
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 240  
 gatggggctg ccatggacag tgtgcctctg atcagcccct tggacatcag ccagctccag  
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 360  
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 420  
 gggcgcaggc tgcccaccgc acggatgac gccttcgcca tggcgctact gggctgcgtg  
 480  
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 600  
 cgccaccgca gcatactggc ggccatcggg gcctaccgc tgagccgcaa gcacggcacg  
 660  
 gagacgccgg cggcctgggg ggacggctac cgcgcagcca aggaggagcg caaggggccc  
 720

<210> 3094

<211> 179  
 <212> PRT  
 <213> Homo sapiens

<400> 3094

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Met Val Lys Leu Gly Cys Ser Phe Ser Gly Lys Pro Gly Lys Asp Pro
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Gly Asp Gln Asp Gly Ala Ala Met Asp Ser Val Pro Leu Ile Ser Pro
          20          25          30
Leu Asp Ile Ser Gln Leu Gln Pro Pro Leu Pro Asp Gln Val Val Ile
      35          40          45
Lys Thr Gln Thr Glu Tyr Gln Leu Ser Ser Pro Asp Gln Gln Asn Phe
      50          55          60
Pro Asp Leu Glu Gly Gln Arg Leu Asn Cys Ser His Pro Glu Glu Gly
65          70          75          80
Arg Arg Leu Pro Thr Ala Arg Met Ile Ala Phe Ala Met Ala Leu Leu
          85          90          95
Gly Cys Val Leu Ile Met Tyr Lys Ala Ile Trp Tyr Asp Gln Phe Thr
          100         105         110
Cys Pro Asp Gly Phe Leu Leu Arg His Lys Ile Cys Thr Pro Leu Thr
          115         120         125
Leu Glu Met Tyr Tyr Thr Glu Met Asp Pro Glu Arg His Arg Ser Ile
          130         135         140
Leu Ala Ala Ile Gly Ala Tyr Pro Leu Ser Arg Lys His Gly Thr Glu
145         150         155         160
Thr Pro Ala Ala Trp Gly Asp Gly Tyr Arg Ala Ala Lys Glu Glu Arg
          165         170         175
Lys Gly Pro

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<210> 3095  
 <211> 519  
 <212> DNA  
 <213> Homo sapiens

<400> 3095

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&lt;211&gt; 1359

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3098

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2314

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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3101

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&lt;210&gt; 3102

&lt;211&gt; 410

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3102

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65           70           75           80
Asp Met Lys Gly Asp Asp Val Ile Val Phe Leu His Ile Gln Lys Thr
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Gly Gly Thr Thr Phe Gly Arg His Leu Val Gln Asn Val Arg Leu Glu
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Val Pro Cys Asp Cys Arg Pro Gly Gln Lys Lys Cys Thr Cys Tyr Arg
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Pro Asn Arg Arg Glu Thr Trp Leu Phe Ser Arg Phe Ser Thr Gly Trp
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Ser Cys Gly Leu His Ala Asp Trp Thr Glu Leu Thr Asn Cys Val Pro
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Gly Val Leu Asp Arg Arg Asp Ser Ala Ala Leu Arg Thr Pro Arg Lys
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Phe Tyr Tyr Ile Thr Leu Leu Arg Asp Pro Val Ser Arg Tyr Leu Ser
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Glu Trp Arg His Val Gln Arg Gly Ala Thr Trp Lys Thr Ser Leu His
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Met Cys Asp Gly Arg Thr Pro Thr Pro Glu Glu Leu Pro Pro Cys Tyr
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Glu Gly Thr Asp Trp Ser Gly Cys Thr Leu Gln Glu Phe Met Asp Cys
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Pro Tyr Asn Leu Ala Asn Asn Arg Gln Val Arg Met Leu Ala Asp Leu
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&lt;211&gt; 1228

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3103

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 35 40 45  
 Ala Ala Ala Trp Gln Arg Ala Ser Leu Gly Gln Trp Xaa Arg Arg Pro  
 50 55 60  
 Val Ala Ala Leu Ala Pro Tyr Ser Asp Ser Leu Val Glu Pro Leu Val  
 65 70 75 80  
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 85 90 95  
 Cys Glu Thr Thr Pro Gly Ala Lys Gly Asp Ser His Lys Thr Gln Val  
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&lt;210&gt; 3106

&lt;211&gt; 1366

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3106

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2325

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Arg Glu Glu Leu Ala Arg Asp Lys Cys Val Val Ile Gly Leu Gln Ser		
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Gln Lys His Phe Pro Ser Thr Lys Arg Lys Arg Asp Arg Gly Ala Gly		
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Ser Lys Arg Lys Arg Arg Pro Arg Gly Arg Gly Ala Lys Ala Pro Arg		
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Lys Val Arg Arg Leu Gly Arg Glu Leu Pro Val Asn Thr Leu Asp Glu		
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Leu Ile Asp Gln Leu Gly Gly Pro Gln Arg Val Ala Glu Met Thr Gly		
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Glu Ala Lys Glu Pro Trp Glu Ser Gly Tyr Ala Leu Ser Leu Thr His						
	1125		1130		1135	
Cys Ser His Ser Ala Trp Asn Arg His Cys Arg Leu Ala Gln Glu Gly						
	1140		1145		1150	
Lys Asp Cys Leu Gln Gly Leu Arg Leu Arg His His Tyr Met Leu Cys						
	1155		1160		1165	
Gly Ala Leu Leu Arg Val Trp Gly Arg Ile Ala Ala Val Met Ala Asp						
	1170		1175		1180	
Val Ser Ser Ser Ser Tyr Leu Gln Ile Val Arg Leu Lys Thr Lys Asp						
	1185		1190		1195	1200
Arg Lys Lys Gln Val Gly Ile Lys Ile Pro Glu Gly Cys Val Arg Arg						
	1205		1210		1215	
Val Leu Gln Glu Leu Arg Leu Met Asp Ala Asp Val Lys Arg Arg Gln						
	1220		1225		1230	
Ala Pro Ala Leu Gly Cys Pro Ala Pro Pro Ala Pro Arg Pro Leu Ala						
	1235		1240		1245	
Leu Pro Cys Gly Pro Gly Glu Val Leu Asp Leu Thr Tyr Ser Pro Pro						
	1250		1255		1260	
Ala Glu Ala Phe Pro Pro Pro Pro His Phe Ser Phe Pro Ala Pro Leu						
	1265		1270		1275	1280
Ser Leu Asp Ala Gly Pro Gly Val Val Pro Leu Gly Thr Pro Asp Ala						
	1285		1290		1295	
Gln Ala Asp Pro Ala Ala Leu Ala His Gln Gly Cys Asp Ile Asn Phe						
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Lys Glu Val Leu Glu Asp Met Leu Arg Ser Leu His Ala Gly Pro Pro						
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Ser Glu Gly Ala Leu Gly Glu Gly Ala Gly Ala Gly Gly Ala Ala Gly						
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Gly Ala Gln Ala Pro Leu						
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<210> 3107  
<211> 2102  
<212> DNA  
<213> Homo sapiens

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1440



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 2102

&lt;210&gt; 3108

&lt;211&gt; 517

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3108

Met	Leu	Gln	Glu	Trp	Leu	Ala	Ala	Val	Gly	Asp	Asp	Tyr	Ala	Ala	Val
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Val	Trp	Arg	Pro	Glu	Gly	Glu	Pro	Arg	Phe	Tyr	Pro	Asp	Glu	Glu	Gly
			20					25					30		
Pro	Lys	His	Trp	Thr	Lys	Glu	Arg	His	Gln	Phe	Leu	Met	Glu	Leu	Lys
		35					40					45			
Gln	Glu	Ala	Leu	Thr	Phe	Ala	Arg	Asn	Trp	Gly	Ala	Asp	Tyr	Ile	Leu
	50					55					60				
Phe	Ala	Asp	Thr	Asp	Asn	Ile	Leu	Thr	Asn	Asn	Gln	Thr	Leu	Arg	Leu
65					70				75					80	
Leu	Met	Gly	Gln	Gly	Leu	Pro	Val	Val	Ala	Pro	Met	Leu	Asp	Ser	Gln
			85						90					95	
Thr	Tyr	Tyr	Ser	Asn	Phe	Trp	Cys	Gly	Ile	Thr	Pro	Gln	Gly	Tyr	Tyr
			100					105					110		
Arg	Arg	Thr	Ala	Glu	Tyr	Phe	Pro	Thr	Lys	Asn	Arg	Gln	Arg	Arg	Gly
		115					120					125			
Cys	Phe	Arg	Val	Pro	Met	Val	His	Ser	Thr	Phe	Leu	Ala	Ser	Leu	Arg
	130					135					140				
Ala	Glu	Gly	Ala	Asp	Gln	Leu	Ala	Phe	Tyr	Pro	Pro	His	Pro	Asn	Tyr
145					150				155					160	
Thr	Trp	Pro	Phe	Asp	Asp	Ile	Ile	Val	Phe	Ala	Tyr	Ala	Cys	Gln	Ala
				165				170					175		
Ala	Gly	Val	Ser	Val	His	Val	Cys	Asn	Glu	His	Arg	Tyr	Gly	Tyr	Met



	180		185		190
Asn Val Pro Val Lys Ser His Gln Gly Leu Glu Asp Glu Arg Val Asn					
195		200		205	
Phe Ile His Leu Ile Leu Glu Ala Leu Val Asp Gly Pro Arg Met Gln					
210		215		220	
Ala Ser Ala His Val Thr Arg Pro Ser Lys Arg Pro Ser Lys Ile Gly					
225		230		235	240
Phe Asp Glu Val Phe Val Ile Ser Leu Ala Arg Arg Pro Asp Arg Arg					
	245		250		255
Glu Arg Met Leu Ala Ser Leu Trp Glu Met Glu Ile Ser Gly Arg Val					
	260		265		270
Val Asp Ala Val Asp Gly Trp Met Leu Asn Ser Ser Ala Ile Arg Asn					
	275		280		285
Leu Gly Val Asp Leu Leu Pro Gly Tyr Gln Asp Pro Tyr Ser Gly Arg					
	290		295		300
Thr Leu Thr Lys Gly Glu Val Gly Cys Phe Leu Ser His Tyr Ser Ile					
305		310		315	320
Trp Glu Glu Val Val Ala Arg Gly Leu Ala Arg Val Leu Val Phe Glu					
	325		330		335
Asp Asp Val Arg Phe Glu Ser Asn Phe Arg Gly Arg Leu Glu Arg Leu					
	340		345		350
Met Glu Asp Val Glu Ala Glu Lys Leu Ser Trp Asp Leu Ile Tyr Leu					
	355		360		365
Gly Arg Lys Gln Val Asn Pro Glu Lys Glu Thr Ala Val Glu Gly Leu					
	370		375		380
Pro Gly Leu Val Val Ala Gly Tyr Ser Tyr Trp Thr Leu Ala Tyr Ala					
385		390		395	400
Leu Arg Leu Ala Gly Ala Arg Lys Leu Leu Ala Ser Gln Pro Leu Arg					
	405		410		415
Arg Met Leu Pro Val Asp Glu Phe Leu Pro Ile Met Phe Asp Gln His					
	420		425		430
Pro Asn Glu Gln Tyr Lys Ala His Phe Trp Pro Arg Asp Leu Val Ala					
	435		440		445
Phe Ser Ala Gln Pro Leu Leu Ala Ala Pro Thr His Tyr Ala Gly Asp					
	450		455		460
Ala Glu Trp Leu Ser Asp Thr Glu Thr Ser Ser Pro Trp Asp Asp Asp					
465		470		475	480
Ser Gly Arg Leu Ile Ser Trp Ser Gly Ser Gln Lys Thr Leu Arg Ser					
	485		490		495
Pro Arg Leu Asp Leu Thr Gly Ser Ser Gly His Ser Leu Gln Pro Gln					
	500		505		510
Pro Arg Asp Glu Leu					
515					

&lt;210&gt; 3109

&lt;211&gt; 959

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3109

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&lt;210&gt; 3110

&lt;211&gt; 207

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3110

Met	Tyr	Lys	Arg	Gly	Leu	Val	Gln	Val	Trp	Ser	Leu	Glu	Gln	Pro	Glu
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Trp	His	Cys	Lys	Ile	Asp	Glu	Gly	Ser	Ala	Gly	Leu	Val	Ala	Ser	Cys
			20					25					30		
Trp	Ser	Pro	Asp	Gly	Arg	His	Ile	Leu	Asn	Thr	Thr	Glu	Phe	His	Leu
		35				40						45			
Arg	Ile	Thr	Val	Trp	Ser	Leu	Cys	Thr	Lys	Ser	Val	Ser	Tyr	Ile	Lys
	50					55					60				
Tyr	Pro	Lys	Ala	Cys	Leu	Gln	Gly	Ile	Thr	Phe	Thr	Arg	Asp	Gly	Arg
65					70					75				80	
Tyr	Met	Ala	Leu	Ala	Glu	Arg	Arg	Asp	Cys	Lys	Asp	Tyr	Val	Ser	Ile
			85					90						95	
Phe	Val	Cys	Ser	Asp	Trp	Gln	Leu	Leu	Arg	His	Phe	Asp	Thr	Asp	Thr
			100					105					110		
Gln	Asp	Leu	Thr	Gly	Ile	Glu	Trp	Ala	Pro	Asn	Gly	Cys	Val	Leu	Ala
	115						120					125			
Val	Trp	Asp	Thr	Cys	Leu	Glu	Tyr	Lys	Ile	Leu	Leu	Tyr	Ser	Leu	Asp
	130					135					140				
Gly	Arg	Leu	Leu	Ser	Thr	Tyr	Ser	Ala	Xaa	Arg	Val	Val	Xaa	Leu	Gly

145		150		155		160									
Ile	Lys	Ser	Val	Ala	Trp	Ser	Pro	Ser	Ser	Gln	Phe	Leu	Ala	Val	Gly
		165				170								175	
Ser	Tyr	Asp	Gly	Lys	Val	Arg	Ile	Leu	Asn	His	Val	Thr	Trp	Lys	Met
		180				185								190	
Ile	Thr	Glu	Phe	Gly	His	Pro	Cys	Ser	Pro	Ile	Asn	Asp	Ser	Gln	
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&lt;210&gt; 3111

&lt;211&gt; 1269

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3111

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<211> 151  
<212> PRT  
<213> Homo sapiens

<400> 3112  
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20 25 30  
Glu Gly Arg Arg Gly Ala Arg Thr Ala Gly Leu Arg Gly Arg Pro Trp  
35 40 45  
Arg Asp Trp Glu Glu Arg Arg Gly Val Thr Thr Val Gln His Pro Glu  
50 55 60  
Lys Ser Asp Trp Gln Thr Arg Thr Gly Gln Pro Cys Ser Cys Met Ile  
65 70 75 80  
Gln Glu Leu Ala Ser Glu Arg Glu Ser Val Ala Glu Ala Gly Gly Ser  
85 90 95  
Ala Arg Gln Lys Val Arg Gly Leu Val Leu Arg Arg Gly Lys Arg Gln  
100 105 110  
Ser Glu Ser Leu His Ala Pro Gly Leu His Gly Arg Ala Arg Ala Ser  
115 120 125  
Gln Lys Arg Val Asn Asp Pro Glu Cys Asp Trp Glu Gly Glu Leu Ile  
130 135 140  
Pro Tyr Gln Glu Thr Gly Ser  
145 150

<210> 3113  
<211> 631  
<212> DNA  
<213> Homo sapiens

<400> 3113  
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 631

<210> 3114  
 <211> 210  
 <212> PRT  
 <213> Homo sapiens

<400> 3114  
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 Ile Val Ala Ile Met Ile Pro Glu Pro Lys Gly Lys Glu Ile Val Ser  
 35 40 45  
 Leu Leu Glu Arg Asn Ile Thr Val Thr Met Tyr Ile Thr Ile Gly Thr  
 50 55 60  
 Arg Asn Leu Gln Lys Tyr Val Ser Arg Thr Ser Val Val Phe Val Ser  
 65 70 75 80  
 Ile Ser Phe Ile Val Leu Met Ile Ile Ser Leu Ala Trp Leu Val Phe  
 85 90 95  
 Tyr Tyr Ile Gln Arg Phe Arg Tyr Ala Asn Ala Arg Asp Arg Asn Gln  
 100 105 110  
 Arg Arg Leu Gly Asp Ala Ala Lys Lys Ala Ile Ser Lys Leu Gln Ile  
 115 120 125  
 Arg Thr Ile Lys Lys Gly Asp Lys Glu Thr Glu Ser Asp Phe Asp Asn  
 130 135 140  
 Cys Ala Val Cys Ile Glu Gly Tyr Lys Pro Asn Asp Val Val Arg Ile  
 145 150 155 160  
 Leu Pro Cys Arg His Leu Phe His Lys Ser Cys Val Asp Pro Trp Leu  
 165 170 175  
 Leu Asp His Arg Thr Cys Pro Met Cys Lys Met Asn Ile Leu Lys Ala  
 180 185 190  
 Leu Gly Ile Pro Pro Asn Ala Asp Cys Met Asp Asp Phe Ala Thr Asp  
 195 200 205  
 Phe Glu  
 210

<210> 3115  
 <211> 1366  
 <212> DNA  
 <213> Homo sapiens

<400> 3115  
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 180

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 420  
 aagaaggacg acgcagttcc acagtctgat ggagttcgag gaatttataa actgctttgc  
 480  
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 1366

&lt;210&gt; 3116

&lt;211&gt; 191

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3116

Met	Glu	Lys	Arg	Thr	Cys	Ala	Leu	Cys	Pro	Lys	Asp	Val	Glu	Tyr	Asn
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Val	Leu	Tyr	Phe	Ala	Gln	Ser	Glu	Asn	Ile	Ala	Ala	His	Glu	Asn	Cys
			20					25					30		
Leu	Leu	Tyr	Ser	Ser	Gly	Leu	Val	Glu	Cys	Glu	Asp	Gln	Asp	Pro	Leu
		35					40					45			
Asn	Pro	Asp	Arg	Ser	Phe	Asp	Val	Glu	Ser	Val	Lys	Lys	Glu	Ile	Gln



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Arg Gly Arg Lys Leu Lys Cys Lys Phe Cys His Lys Arg Gly Ala Thr				
65		70		75
Val Gly Cys Asp Leu Lys Asn Cys Asn Lys Asn Tyr His Phe Phe Cys				80
	85		90	95
Ala Lys Lys Asp Asp Ala Val Pro Gln Ser Asp Gly Val Arg Gly Ile				
	100		105	110
Tyr Lys Leu Leu Cys Gln Gln His Ala Gln Phe Pro Ile Ile Ala Gln				
	115		120	125
Ser Gly Lys Phe Ser Gly Val Lys Arg Lys Arg Gly Arg Lys Lys Pro				
	130		135	140
Leu Ser Gly Asn His Val Gln Pro Pro Glu Thr Met Lys Cys Asn Thr				
145		150		155
Phe Ile Arg Gln Val Lys Glu Glu His Gly Arg His Thr Asp Ala Thr				160
	165		170	175
Val Lys Val Pro Phe Leu Lys Lys Cys Lys Xaa Ser Arg Thr Ser				
	180		185	190

&lt;210&gt; 3117

&lt;211&gt; 1373

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3117

nnaaccaga agcaaaagag cagagctacc atgtcctctt ggagcagaca gcgacaaaa  
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 120  
 gcctcagcct ggggggtcac cctgagcccc aaagactgcc aggtgttccg ctcagaccat  
 180  
 ggcagctcca tctcctgtca accacctgcc gaaatccccg gctacctgcc agccgacacc  
 240  
 gtgcacctgg ccgtggaatt cttcaacctg acccacctgc cagccaacct cctccagggc  
 300  
 gcctctaagc tccaagaatt gcacctctcc agcaatgggc tggaaagcct ctgcccga  
 360  
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 420  
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 480  
 cagctggagg tcttgagggt ctgctggcta cacggcctga aagctctggg gcatctggac  
 540  
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 600  
 cgcacccttg accttgggga gaaccagttg gagaccttgc cacctgacct cctgaggggt  
 660  
 ccgctgcaat tagaacggct acatctagaa ggcaacaaat tgcaagtact gggaaaagat  
 720  
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 780  
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 840  
 tcactggcca gcgtgcccga ggggctctgg gcatccctag ggcagccaaa ctgggacatg  
 900

cgggatggct tgcacatctc cggcaacccc tggatctgtg accagaacct gagcgacctc  
 960  
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 1080  
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 1200  
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 1260  
 tctactaaaa atataaaaaa ttagccaggc gtggtggtgg gcacctgtag tcccagcaac  
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 1373

<210> 3118

<211> 312

<212> PRT

<213> Homo sapiens

<400> 3118

Val	Thr	Leu	Ser	Pro	Lys	Asp	Cys	Gln	Val	Phe	Arg	Ser	Asp	His	Gly
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Ser	Ser	Ile	Ser	Cys	Gln	Pro	Pro	Ala	Glu	Ile	Pro	Gly	Tyr	Leu	Pro
			20					25					30		
Ala	Asp	Thr	Val	His	Leu	Ala	Val	Glu	Phe	Phe	Asn	Leu	Thr	His	Leu
		35					40					45			
Pro	Ala	Asn	Leu	Leu	Gln	Gly	Ala	Ser	Lys	Leu	Gln	Glu	Leu	His	Leu
	50					55					60				
Ser	Ser	Asn	Gly	Leu	Glu	Ser	Leu	Ser	Pro	Glu	Phe	Leu	Arg	Pro	Val
65					70					75					80
Pro	Gln	Leu	Arg	Val	Leu	Asp	Leu	Thr	Arg	Asn	Ala	Leu	Thr	Gly	Leu
			85						90					95	
Pro	Pro	Gly	Leu	Phe	Gln	Ala	Ser	Ala	Thr	Leu	Asp	Thr	Leu	Val	Leu
		100						105					110		
Lys	Glu	Asn	Gln	Leu	Glu	Val	Leu	Glu	Val	Ser	Trp	Leu	His	Gly	Leu
	115						120					125			
Lys	Ala	Leu	Gly	His	Leu	Asp	Leu	Ser	Gly	Asn	Arg	Leu	Arg	Lys	Leu
	130					135					140				
Pro	Pro	Gly	Leu	Leu	Ala	Asn	Phe	Thr	Leu	Leu	Arg	Thr	Leu	Asp	Leu
145					150					155					160
Gly	Glu	Asn	Gln	Leu	Glu	Thr	Leu	Pro	Pro	Asp	Leu	Leu	Arg	Gly	Pro
			165					170						175	
Leu	Gln	Leu	Glu	Arg	Leu	His	Leu	Glu	Gly	Asn	Lys	Leu	Gln	Val	Leu
		180						185						190	
Gly	Lys	Asp	Leu	Leu	Leu	Pro	Gln	Pro	Asp	Leu	Arg	Tyr	Leu	Phe	Leu
	195					200						205			
Ser	Gly	Asn	Lys	Leu	Ala	Arg	Val	Ala	Ala	Gly	Ala	Phe	Gln	Gly	Leu
	210					215						220			
Arg	Gln	Leu	Asp	Met	Leu	Asp	Leu	Ser	Asn	Asn	Ser	Leu	Ala	Ser	Val
225					230					235					240
Pro	Glu	Gly	Leu	Trp	Ala	Ser	Leu	Gly	Gln	Pro	Asn	Trp	Asp	Met	Arg

<210> 3119  
<211> 427  
<212> DNA  
<213> Homo sapiens

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<210> 3120
<211> 142
<212> PRT
<213> Homo sapiens
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2338

	115		120		125
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		Tyr	Tyr	Pro	Ser
			Pro	Glu	Asp
				Asn	Ala
	130		135		140

<210> 3121  
 <211> 284  
 <212> DNA  
 <213> Homo sapiens

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 120  
 taagaggaac atgaacctgg acggggcagc ttccattgtc cctctcctgc tcctgctaata  
 180  
 gaacaaggcc tccccagagt atgaagagaa catgcacaga taccagaagg cagccaagct  
 240  
 cttccgggga agattctctt tattctgggtg gacagtggta tgaa  
 284

<210> 3122  
 <211> 91  
 <212> PRT  
 <213> Homo sapiens

<400> 3122  
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 Gly Pro Ser Glu Asp Phe Ser Thr Ser Ala Ala Thr Ser Ala Ala Ser  
 20 25 30  
 Ser His Val Arg Arg Asn Lys Arg Asn Met Asn Leu Asp Gly Ala Ala  
 35 40 45  
 Ser Ile Val Pro Leu Leu Leu Leu Leu Met Asn Lys Ala Ser Pro Glu  
 50 55 60  
 Tyr Glu Glu Asn Met His Arg Tyr Gln Lys Ala Ala Lys Leu Phe Arg  
 65 70 75 80  
 Gly Arg Phe Ser Leu Phe Trp Trp Thr Val Val  
 85 90

<210> 3123  
 <211> 344  
 <212> DNA  
 <213> Homo sapiens

<400> 3123  
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 gagattatga ggagccgcca agagatgaaa aaccgatca gtaacaagaa gaggaagaaa  
 120  
 gcagcccagg tgaccttcag aaagacattg gagaaggaag caaagggaga ggagcccagc  
 180  
 atcgagctcc ccaagttcaa acagaggaag ggggagtccg acggggccta tatccaccgc  
 240

atgcagcaag aggccagca tgtgctgttc ctcagcaaga accaggccat ccggcagcca  
300

gaggtgcagg cagctcccaa ggagaagtct gagcagaaaa aagc  
344

<210> 3124

<211> 92

<212> PRT

<213> Homo sapiens

<400> 3124

Met	Arg	Ser	Arg	Gln	Glu	Met	Lys	Asn	Pro	Ile	Ser	Asn	Lys	Lys	Arg
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Lys	Lys	Ala	Ala	Gln	Val	Thr	Phe	Arg	Lys	Thr	Leu	Glu	Lys	Glu	Ala
			20					25					30		
Lys	Gly	Glu	Glu	Pro	Asp	Ile	Ala	Val	Pro	Lys	Phe	Lys	Gln	Arg	Lys
		35					40					45			
Gly	Glu	Ser	Asp	Gly	Ala	Tyr	Ile	His	Arg	Met	Gln	Gln	Glu	Ala	Gln
	50					55				60					
His	Val	Leu	Phe	Leu	Ser	Lys	Asn	Gln	Ala	Ile	Arg	Gln	Pro	Glu	Val
65				70					75					80	
Gln	Ala	Ala	Pro	Lys	Glu	Lys	Ser	Glu	Gln	Lys	Lys				
			85						90						

<210> 3125

<211> 647

<212> DNA

<213> Homo sapiens

<400> 3125

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120  
ggtcagcagg cagtttagtt gtgggagtat ttccaatttg catgaatgaa acatggacaa  
180  
ataagataag gctggctcca gggaagtaat tccccagtt cccctgagcc ttggatctgg  
240  
aaaactgcag cccatcctgg aattagggaa catcacaaaa cgtactgggg agaactcccc  
300  
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360  
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420  
aaccatctt cctgtgttct ctgccaagag agctggagca aaagagatga gtttgagact  
480  
ctgattcatc catcaagaca aataaactca gtctatggag gtttagcagg caatttgtga  
540  
agcaaacaaa agttgagttt tggaaagggg ctctgaagaa aatgaagatg acataccagg  
600  
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647

<210> 3126

<211> 116  
 <212> PRT  
 <213> Homo sapiens

<400> 3126  
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 Phe Gln Asn Ser Thr Phe Val Cys Phe Thr Asn Cys Pro Ala Asn Leu  
 20 25 30  
 His Arg Leu Ser Leu Phe Val Leu Met Asp Glu Ser Glu Ser Gln Thr  
 35 40 45  
 His Leu Phe Cys Ser Ser Ser Leu Gly Arg Glu His Arg Lys Met Gly  
 50 55 60  
 Phe Ala Tyr Val Cys Val Trp Gly Gly Leu Phe Phe Leu Cys Phe Ser  
 65 70 75 80  
 Val Leu Ala Ile Ala Cys Gly Arg Ala Gly Thr Trp Asp Leu Ala Arg  
 85 90 95  
 Leu Leu Ala Trp Ala Glu Ala Thr Trp Gly Val Leu Pro Ser Thr Phe  
 100 105 110  
 Cys Asp Val Pro  
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<210> 3127  
 <211> 2218  
 <212> DNA  
 <213> Homo sapiens

<400> 3127  
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 120  
 actttggaga aattgaagag cctagggctt tttgggctgc aagtcccaga agaatatggt  
 180  
 ggccctgggct tctccaacac catgtactca agactagggg agatcatcag catggatggg  
 240  
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 300  
 ggactgagg agcagaaagc caaatacttg cctaaactgg cgtccgggga gcacatagca  
 360  
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 420  
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 480  
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 660  
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 720  
 atgaacatcc tcaacagcgg ccggttcagc atgggcagcg tcgtggctgg gctgctcaag  
 780



agattgattg aaatgactgc tgagtacgcc tgcacaagga aacagtttaa caagaggctc  
840  
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960  
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1020  
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1080  
cgtgacaccc gcatacctct catcttcgag ggaaccaatg agattctccg gatgtacatc  
1140  
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1200  
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1260  
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1320  
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1440  
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1620  
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1680  
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1920  
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1980  
caccatagtg gaaactgggg cttatgctgc tgccctccagg gtgtgaggtg ggtggggacc  
2040  
tgtgtcaggt gtggatagcc atttctgctc aaccacacat tctctaagaa acagcttgaa  
2100  
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2160  
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2218

&lt;210&gt; 3128

&lt;211&gt; 565

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3128

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 Pro Val Glu Lys Phe Phe Thr Glu Glu Val Asp Ser Arg Lys Ile Asp  
 20 25 30  
 Gln Glu Gly Lys Ile Pro Asp Glu Thr Leu Glu Lys Leu Lys Ser Leu  
 35 40 45  
 Gly Leu Phe Gly Leu Gln Val Pro Glu Glu Tyr Gly Gly Leu Gly Phe  
 50 55 60  
 Ser Asn Thr Met Tyr Ser Arg Leu Gly Glu Ile Ile Ser Met Asp Gly  
 65 70 75 80  
 Ser Ile Thr Val Thr Leu Ala Ala His Gln Ala Ile Gly Leu Lys Gly  
 85 90 95  
 Ile Ile Leu Ala Gly Thr Glu Glu Gln Lys Ala Lys Tyr Leu Pro Lys  
 100 105 110  
 Leu Ala Ser Gly Glu His Ile Ala Ala Phe Cys Leu Thr Glu Pro Ala  
 115 120 125  
 Ser Gly Ser Asp Ala Ala Ser Ile Arg Ser Arg Ala Thr Leu Ser Glu  
 130 135 140  
 Asp Lys Lys His Tyr Ile Leu Asn Gly Ser Lys Val Trp Ile Thr Asn  
 145 150 155 160  
 Gly Gly Leu Ala Asn Ile Phe Thr Val Phe Ala Lys Thr Glu Val Val  
 165 170 175  
 Asp Ser Asp Gly Ser Val Lys Asp Lys Ile Thr Ala Phe Ile Val Glu  
 180 185 190  
 Arg Asp Phe Gly Gly Val Thr Asn Gly Lys Pro Glu Asp Lys Leu Gly  
 195 200 205  
 Ile Arg Gly Ser Asn Thr Cys Glu Val His Phe Glu Asn Thr Lys Ile  
 210 215 220  
 Pro Val Glu Asn Ile Leu Gly Glu Val Gly Asp Gly Phe Lys Val Ala  
 225 230 235 240  
 Met Asn Ile Leu Asn Ser Gly Arg Phe Ser Met Gly Ser Val Val Ala  
 245 250 255  
 Gly Leu Leu Lys Arg Leu Ile Glu Met Thr Ala Glu Tyr Ala Cys Thr  
 260 265 270  
 Arg Lys Gln Phe Asn Lys Arg Leu Ser Glu Phe Gly Leu Ile Gln Glu  
 275 280 285  
 Lys Phe Ala Leu Met Ala Gln Lys Ala Tyr Val Met Glu Ser Met Thr  
 290 295 300  
 Tyr Leu Thr Ala Gly Met Leu Asp Gln Pro Gly Phe Pro Asp Cys Ser  
 305 310 315 320  
 Ile Glu Ala Ala Met Val Lys Val Phe Ser Ser Glu Ala Ala Trp Gln  
 325 330 335  
 Cys Val Ser Glu Ala Leu Gln Ile Leu Gly Gly Leu Gly Tyr Thr Arg  
 340 345 350  
 Asp Tyr Pro Tyr Glu Arg Ile Leu Arg Asp Thr Arg Ile Leu Leu Ile  
 355 360 365  
 Phe Glu Gly Thr Asn Glu Ile Leu Arg Met Tyr Ile Ala Leu Thr Gly  
 370 375 380  
 Leu Gln His Ala Gly Arg Ile Leu Thr Thr Arg Ile His Glu Leu Lys  
 385 390 395 400  
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 405 410 415  
 Asp Ser Leu Gly Arg Thr Val Asp Leu Gly Leu Thr Gly Asn His Gly

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<210> 3129
<211> 1964
<212> DNA
<213> Homo sapiens
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2344

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 1680  
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 1860  
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 1920  
 cccaagggtg aactctgact tctccttggg actacatatg gccg  
 1964

&lt;210&gt; 3130

&lt;211&gt; 273

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3130

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1				5				10					15		
Cys	Glu	Leu	Ala	Ala	Glu	Val	Ala	Ala	Glu	Val	Glu	Lys	Ser	Ser	Asp
			20					25					30		
Gly	Pro	Gly	Ala	Ala	Gln	Glu	Pro	Thr	Trp	Leu	Thr	Asp	Val	Pro	Ala
		35					40					45			
Ala	Met	Glu	Phe	Ile	Ala	Ala	Thr	Glu	Val	Ala	Val	Ile	Gly	Phe	Phe
	50					55					60				
Gln	Asp	Leu	Glu	Ile	Pro	Ala	Val	Pro	Ile	Leu	His	Ser	Met	Val	Gln

65		70		75		80									
Lys	Phe	Pro	Gly	Val	Ser	Phe	Gly	Ile	Ser	Thr	Asp	Ser	Glu	Val	Leu
			85						90					95	
Thr	His	Tyr	Asn	Ile	Thr	Gly	Asn	Thr	Ile	Cys	Leu	Phe	Arg	Leu	Val
			100					105					110		
Asp	Asn	Glu	Gln	Leu	Asn	Leu	Glu	Asp	Glu	Asp	Ile	Glu	Ser	Ile	Asp
		115					120					125			
Ala	Thr	Lys	Leu	Ser	Arg	Phe	Ile	Glu	Ile	Asn	Ser	Leu	His	Met	Val
		130				135					140				
Thr	Glu	Tyr	Asn	Pro	Val	Thr	Val	Ile	Gly	Leu	Phe	Asn	Ser	Val	Ile
145				150						155					160
Gln	Ile	His	Leu	Leu	Leu	Ile	Met	Asn	Lys	Ala	Ser	Pro	Glu	Tyr	Glu
			165					170					175		
Glu	Asn	Met	His	Arg	Tyr	Gln	Lys	Ala	Ala	Lys	Leu	Phe	Gln	Gly	Lys
			180					185					190		
Ile	Leu	Phe	Ile	Leu	Val	Asp	Ser	Gly	Met	Lys	Glu	Asn	Gly	Lys	Val
		195				200						205			
Ile	Ser	Phe	Phe	Lys	Leu	Lys	Glu	Ser	Gln	Leu	Pro	Ala	Leu	Ala	Ile
	210					215					220				
Tyr	Gln	Thr	Leu	Asp	Asp	Glu	Trp	Asp	Thr	Leu	Pro	Thr	Ala	Glu	Val
225				230						235				240	
Ser	Val	Glu	His	Val	Gln	Asn	Phe	Cys	Asp	Gly	Phe	Leu	Ser	Gly	Lys
			245					250					255		
Leu	Leu	Lys	Glu	Asn	Arg	Glu	Ser	Lys	Arg	Lys	Thr	Pro	Lys	Val	Glu
		260						265					270		

Leu

&lt;210&gt; 3131

&lt;211&gt; 1544

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3131

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120  
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&lt;210&gt; 3132

&lt;211&gt; 283

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3132

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			20					25					30		
Thr	Arg	Ser	Pro	Val	Ser	Pro	Leu	Ala	Ala	Gln	Gly	Ile	Pro	Leu	Pro
		35					40					45			
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His	Met	Tyr	Thr	Ser	Ser	Leu	Ala	Thr	Leu	Thr	Lys	Tyr	Pro	Glu	Ser
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Arg	Ile	Gly	Arg	Leu	Phe	Asp	Gly	Thr	Glu	Pro	Ile	Val	Leu	Asp	Ser
				85				90					95		
Leu	Lys	Gln	His	Tyr	Phe	Ile	Asp	Arg	Asp	Gly	Gln	Met	Phe	Arg	Tyr
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115	120	125
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Pro Met Leu Leu Glu Met Glu Arg Trp Lys Gln Asp Arg Glu Thr Gly		
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Arg Phe Ser Arg Pro Cys Glu Cys Leu Val Val Arg Val Ala Pro Asp		
165	170	175
Leu Gly Glu Arg Ile Thr Leu Ser Gly Asp Lys Ser Leu Ile Glu Glu		
180	185	190
Val Phe Pro Glu Ile Gly Asp Val Met Cys Asn Ser Val Asn Ala Gly		
195	200	205
Trp Asn His Asp Ser Thr His Val Ile Arg Phe Pro Leu Asn Gly Tyr		
210	215	220
Cys His Leu Asn Ser Val Gln Val Leu Glu Arg Leu Gln Gln Arg Gly		
225	230	235
Phe Glu Ile Val Gly Ser Cys Gly Gly Gly Val Asp Ser Ser Gln Phe		
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 <211> 621  
 <212> DNA  
 <213> Homo sapiens

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<213> Homo sapiens

<400> 3134

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			20					25					30		
Thr	Glu	Val	Lys	Ser	Glu	Glu	Gly	Pro	Gly	Trp	Thr	Ile	Leu	Arg	Asp
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<210> 3135

<211> 3166

<212> DNA

<213> Homo sapiens

<400> 3135

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<211> 278

<212> PRT

<213> Homo sapiens

<400> 3136

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			20					25					30		
Lys	Cys	Pro	Ile	Cys	Gln	Thr	Val	Lys	Ala	Asn	Gln	Leu	Glu	Leu	Glu
		35					40					45			
Thr	His	Thr	Arg	Glu	His	Arg	Leu	Gly	Asn	His	Tyr	Lys	Cys	Asp	Gln
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Cys	Gly	Tyr	Leu	Ser	Lys	Thr	Ala	Asn	Lys	Leu	Ile	Glu	His	Val	Arg
65					70					75					80
Val	His	Thr	Gly	Ser	Gly	Pro	Phe	His	Trp	Asp	Gln	Cys	Ser	Tyr	Ser
			85						90					95	
Cys	Lys	Arg	Lys	Asp	Asn	Leu	Asn	Leu	His	Lys	Lys	Leu	Lys	His	Ala
			100					105					110		
Pro	Arg	Gln	Thr	Phe	Ser	Cys	Glu	Glu	Cys	Leu	Phe	Lys	Thr	Thr	His
		115					120						125		
Pro	Phe	Val	Phe	Ser	Arg	His	Val	Lys	Lys	His	Gln	Ser	Gly	Asp	Cys
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Gly	Pro	Gly	Ala	Pro	Leu	Leu	Val	Val	Gly	Ser	Ser	Arg	Asn	Leu	Leu
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&lt;210&gt; 3138

&lt;211&gt; 977

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3138

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Leu	Ser	Met	His	His	Gln	Pro	Asp	Pro	Ala	Leu	Thr	Lys	Glu	Phe	Asp

2356

450		455		460
Phe Val Glu Lys Met Pro	Ala Arg Ile Tyr Gln Met Val Arg Asp Glu			
465		470		480
Asn Leu Lys Phe Met Lys Asn Arg Asp Val Tyr Ser Ser Asp Tyr Phe				
	485		490	495
Ser Phe Val Leu Ser Leu Ala Ser Leu Asn Ala Thr Lys Leu Lys His				
	500		505	510
Pro Tyr Tyr Pro Cys Met Ala Lys Val Ser Leu Gln Leu Ala Ile Gln				
	515		520	525
Phe Leu Phe Gln Thr Tyr Leu Arg Thr Lys Lys Lys Leu Arg Val Asp				
	530		535	540
Thr Glu Glu Trp Ile Ala Thr Ile Glu Ala Leu Leu Ser Lys Ser Phe				
	545		550	560
Asp Ala Cys Gln Trp Leu Val Glu Tyr Phe Ile Ser Ser Glu Gly Arg				
	565		570	575
Glu Leu Ile Lys Ile Phe Leu Leu Glu Cys Asn Val Arg Glu Val Arg				
	580		585	590
Val Ala Val Ala Thr Ile Leu Glu Lys Thr Leu Asp Ser Ala Leu Phe				
	595		600	605
Tyr Gln Asp Lys Leu Lys Ser Leu His Gln Leu Leu Glu Val Leu Leu				
	610		615	620
Ala Leu Leu Asp Lys Asp Val Pro Glu Asn Cys Lys Asn Cys Ala Gln				
	625		630	640
Tyr Phe Phe Leu Phe Asn Thr Phe Val Gln Lys Gln Gly Ile Arg Ala				
	645		650	655
Gly Asp Leu Leu Leu Arg His Ser Ala Leu Arg His Met Ile Ser Phe				
	660		665	670
Leu Leu Gly Ala Ser Arg Gln Asn Asn Gln Ile Arg Arg Trp Ser Ser				
	675		680	685
Ala Gln Ala Arg Glu Phe Gly Asn Leu His Asn Thr Val Ala Leu Leu				
	690		695	700
Val Leu His Ser Asp Val Ser Ser Gln Arg Asn Val Ala Pro Gly Ile				
	705		710	720
Phe Lys Gln Arg Pro Pro Ile Ser Ile Ala Pro Ser Ser Pro Leu Leu				
	725		730	735
Pro Leu His Glu Glu Val Glu Ala Leu Leu Phe Met Ser Glu Gly Lys				
	740		745	750
Pro Tyr Leu Leu Glu Val Met Phe Ala Leu Arg Glu Leu Thr Gly Ser				
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Leu Leu Ala Leu Ile Glu Met Val Val Tyr Cys Cys Phe Cys Asn Glu				
	770		775	780
His Phe Ser Phe Thr Met Leu His Phe Ile Lys Asn Gln Leu Glu Thr				
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Ala Pro Pro His Glu Leu Lys Asn Thr Phe Gln Leu Leu His Glu Ile				
	805		810	815
Leu Val Ile Glu Asp Pro Ile Gln Ala Glu Arg Val Lys Phe Val Phe				
	820		825	830
Glu Thr Glu Asn Gly Leu Leu Ala Leu Met His His Ser Asn His Val				
	835		840	845
Asp Ser Ser Arg Cys Tyr Gln Cys Val Lys Phe Leu Val Thr Leu Ala				
	850		855	860
Gln Lys Cys Pro Ala Ala Lys Glu Tyr Phe Lys Glu Asn Ser His His				
	865		870	880
Trp Ser Trp Ala Val Gln Trp Leu Gln Lys Lys Met Ser Glu His Tyr				

				885					890					895			
Trp	Thr	Pro	Gln	Ser	Asn	Val	Ser	Asn	Glu	Thr	Ser	Thr	Gly	Lys	Thr		
			900					905					910				
Phe	Gln	Arg	Thr	Ile	Ser	Ala	Gln	Asp	Ala	Leu	Ala	Tyr	Ala	Thr	Ala		
		915					920					925					
Leu	Leu	Asn	Glu	Lys	Glu	Gln	Ser	Gly	Ser	Ser	Asn	Gly	Ser	Glu	Ser		
	930					935					940						
Ser	Pro	Ala	Asn	Glu	Asn	Gly	Asp	Arg	His	Leu	Gln	Gln	Gly	Ser	Glu		
945					950					955					960		
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Pro

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 <211> 503  
 <212> DNA  
 <213> Homo sapiens

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 ggcttcatgg cactctactc cctcctgcca cacaaggagc tacgcttcat catctatgcc  
 300  
 ttccccatgc tcaacatcac ggctgccaga ggctgctcct acctgtgagt gctctttttg  
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 503

<210> 3140  
 <211> 115  
 <212> PRT  
 <213> Homo sapiens

<400> 3140  
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 20 25 30  
 Leu Asn Lys Ser Ser Asn Trp Gly Thr Ser Pro Leu Leu Trp Tyr Phe  
 35 40 45  
 Tyr Ser Ala Leu Pro Arg Gly Leu Gly Cys Ser Leu Leu Phe Ile Pro  
 50 55 60  
 Leu Gly Leu Val Asp Arg Arg Thr His Ala Pro Thr Val Leu Ala Leu

65		70		75		80									
Gly	Phe	Met	Ala	Leu	Tyr	Ser	Leu	Leu	Pro	His	Lys	Glu	Leu	Arg	Phe
			85						90					95	
Ile	Ile	Tyr	Ala	Phe	Pro	Met	Leu	Asn	Ile	Thr	Ala	Ala	Arg	Gly	Cys
			100					105					110		
Ser	Tyr	Leu													
		115													

&lt;210&gt; 3141

&lt;211&gt; 1815

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3141

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<210> 3142

<211> 451

<212> PRT

<213> Homo sapiens

<400> 3142

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		20					25						30		
Pro	Glu	Gly	Ile	Val	Glu	Glu	Phe	Ala	Thr	Glu	Gly	Thr	Asp	Arg	Lys
		35					40					45			
Asp	Val	Phe	Phe	Tyr	Gln	Ala	Asp	Asp	Glu	His	Tyr	Ile	Pro	Arg	Ala
	50					55					60				
Val	Leu	Leu	Asp	Leu	Glu	Pro	Arg	Val	Ile	His	Ser	Ile	Leu	Asn	Ser
65					70				75					80	
Pro	Tyr	Ala	Lys	Leu	Tyr	Asn	Pro	Glu	Asn	Ile	Tyr	Leu	Ser	Glu	His
			85					90					95		
Gly	Gly	Gly	Ala	Gly	Asn	Asn	Trp	Ala	Ser	Gly	Phe	Ser	Gln	Gly	Glu
			100					105					110		
Lys	Ile	His	Glu	Asp	Ile	Phe	Asp	Ile	Ile	Asp	Arg	Glu	Ala	Asp	Gly
		115					120					125			
Ser	Asp	Ser	Leu	Glu	Gly	Phe	Val	Leu	Cys	His	Ser	Ile	Ala	Gly	Gly
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Thr	Gly	Ser	Gly	Leu	Gly	Ser	Tyr	Leu	Leu	Glu	Arg	Leu	Asn	Asp	Arg
145					150					155				160	
Tyr	Pro	Lys	Lys	Leu	Val	Gln	Thr	Tyr	Ser	Val	Phe	Pro	Asn	Gln	Asp
			165					170					175		
Glu	Met	Ser	Asp	Val	Val	Val	Gln	Pro	Tyr	Asn	Ser	Leu	Leu	Thr	Leu
			180					185					190		
Lys	Arg	Leu	Thr	Gln	Asn	Ala	Asp	Cys	Val	Val	Val	Leu	Asp	Asn	Thr



195	200	205
Ala Leu Asn Arg Ile	Ala Thr Asp Arg Leu His	Ile Gln Asn Pro Ser
210	215	220
Phe Ser Gln Ile Asn Gln	Leu Val Ser Thr Ile	Met Ser Ala Ser Thr
225	230	235
Thr Thr Leu Arg Tyr Pro	Gly Tyr Met Asn Asn	Asp Leu Ile Gly Leu
245	250	255
Ile Ala Ser Leu Ile Pro	Thr Pro Arg Leu His	Phe Leu Met Thr Gly
260	265	270
Tyr Thr Pro Leu Thr Thr	Asp Gln Ser Val Ala	Ser Val Arg Lys Thr
275	280	285
Thr Val Leu Asp Val Met	Arg Arg Leu Leu Gln	Pro Lys Asn Val Met
290	295	300
Val Ser Thr Gly Arg Asp	Arg Gln Thr Asn His	Cys Tyr Ile Ala Ile
305	310	315
Leu Asn Ile Ile Gln Gly	Glu Val Asp Pro Thr	Gln Val His Lys Ser
325	330	335
Leu Gln Arg Ile Arg Glu	Arg Lys Leu Ala Asn	Phe Ile Pro Trp Gly
340	345	350
Pro Ala Ser Ile Gln Val	Ala Leu Ser Arg Lys	Ser Pro Tyr Leu Pro
355	360	365
Ser Ala His Arg Val Ser	Gly Leu Met Met Ala	Asn His Thr Ser Ile
370	375	380
Ser Ser Leu Phe Glu Arg	Thr Cys Arg Gln Tyr	Asp Lys Leu Arg Lys
385	390	395
Arg Glu Ala Phe Leu Glu	Gln Phe Arg Lys Glu	Asp Met Phe Lys Asp
405	410	415
Asn Phe Asp Glu Met Asp	Thr Ser Arg Glu Ile	Val Gln Gln Leu Ile
420	425	430
Asp Glu Tyr His Ala Ala	Thr Arg Pro Asp Tyr	Ile Ser Trp Gly Thr
435	440	445
Gln Glu Gln		
450		

&lt;210&gt; 3143

&lt;211&gt; 356

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3143

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356

&lt;210&gt; 3144



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 <212> PRT  
 <213> Homo sapiens

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 Ala Trp Leu Thr Val Lys His Pro His Thr Val Asp Gln Gln Pro Pro  
 35 40 45  
 Leu Pro Thr Ser Gln Glu Leu Arg Pro Ala Ala Gln Pro Lys Gln Gln  
 50 55 60  
 Pro His His Ser Gln Thr Pro Pro Gln Arg Val Cys Leu Arg Ala Pro  
 65 70 75 80  
 Ser

<210> 3145  
 <211> 436  
 <212> DNA  
 <213> Homo sapiens

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 <212> PRT  
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 35 40 45  
 Arg Leu Pro Pro Phe Thr His Leu Pro Ser Val Pro Gly Pro Pro Ser

50		55		60
Leu Val Cys Gln Thr	Leu Gln Pro Pro Ala Ser Gly His Ser Ala Arg			
65	70	75	80	
Gln Met Thr Ser Gly Gly Glu Pro His Ile Ser Thr Gly Ser Arg Arg				
	85	90	95	
Pro Arg Lys Leu Pro Trp Pro Ala His Pro Arg Cys Ser Ala Cys Pro				
	100	105	110	
Pro Asn Val Val Ser Ser Arg Arg Arg Leu Thr Pro Arg Arg Gly Trp				
	115	120	125	
Gly Thr Ser				
130				

&lt;210&gt; 3147

&lt;211&gt; 3106

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3147

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<210> 3148

<211> 444

<212> PRT

<213> Homo sapiens

<400> 3148

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Thr	Asp	Arg	Trp	Leu	Val	Ile	Asp	Arg	Lys	Val	Tyr	Asn	Ile	Thr	Lys	35	40	45	
Trp	Ser	Ile	Gln	His	Pro	Gly	Gly	Gln	Arg	Val	Ile	Gly	His	Tyr	Ala	50	55	60	
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Phe	Val	Gly	Lys	Phe	Leu	Lys	Pro	Leu	Leu	Ile	Gly	Glu	Leu	Ala	Pro	85	90	95	
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Phe	Arg	Ala	Leu	Arg	Lys	Thr	Ala	Glu	Asp	Met	Asn	Leu	Phe	Lys	Thr	115	120	125	
Asn	His	Val	Phe	Phe	Leu	Leu	Leu	Leu	Ala	His	Ile	Ile	Ala	Leu	Glu	130	135	140	
Ser	Ile	Ala	Trp	Phe	Thr	Val	Phe	Tyr	Phe	Gly	Asn	Gly	Trp	Ile	Pro	145	150	155	160
Thr	Leu	Ile	Thr	Ala	Phe	Val	Leu	Ala	Thr	Ser	Gln	Ala	Gln	Ala	Gly	165	170	175	
Trp	Leu	Gln	His	Asp	Tyr	Gly	His	Leu	Ser	Val	Tyr	Arg	Lys	Pro	Lys	180	185	190	
Trp	Asn	His	Leu	Val	His	Lys	Phe	Val	Ile	Gly	His	Leu	Lys	Gly	Ala	195	200	205	
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Leu	Gly	Glu	Trp	Gln	Pro	Ile	Glu	Tyr	Gly	Lys	Lys	Lys	Leu	Lys	Tyr	245	250	255	
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Val	His	Lys	Asn	Trp	Val	Asp	Leu	Ala	Trp	Ala	Val	Ser	Tyr	Tyr	Ile
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Pro	Leu	Val	Lys	Ser	Leu	Cys	Ala	Lys	His	Gly	Ile	Glu	Tyr	Gln	Glu
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Lys	Pro	Leu	Leu	Arg	Ala	Leu	Leu	Asp	Ile	Ile	Arg	Ser	Leu	Lys	Lys
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&lt;210&gt; 3149

&lt;211&gt; 1006

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3149

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&lt;210&gt; 3150

&lt;211&gt; 201

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3150

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Lys	Trp	Ser	Arg	Ser	Cys	Cys	Arg	Glu	Thr	Leu	Thr	Ser	Arg	Arg	Ser
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&lt;210&gt; 3151

&lt;211&gt; 2079

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3151

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<210> 3152  
<211> 214  
<212> PRT  
<213> Homo sapiens

<400> 3152  
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50 55 60  
Glu Arg Leu Arg Gly Gly Pro Gln Ser Glu His Tyr Arg Ser Leu Gln  
65 70 75 80  
Ala Met Val Ala His Glu Leu Ser Asn Arg Leu Val Asp Leu Glu Gly  
85 90 95  
Arg Ser His His Pro Glu Ser Gly Cys Arg Thr Val Leu Arg Leu His  
100 105 110  
Arg Ala Leu His Trp Leu Gln Leu Phe Leu Glu Gly Leu Arg Thr Ser  
115 120 125  
Pro Glu Asp Ala Arg Thr Ser Ala Leu Cys Ala Asp Ser Tyr Asn Ala  
130 135 140  
Ser Leu Ala Ala Tyr His Pro Trp Val Val Arg Arg Ala Val Thr Val  
145 150 155 160  
Ala Phe Cys Thr Leu Pro Thr Arg Glu Val Phe Leu Glu Ala Met Asn  
165 170 175  
Val Gly Pro Pro Glu Gln Ala Val Gln Met Leu Gly Glu Ala Leu Pro  
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<210> 3153  
<211> 1498  
<212> DNA  
<213> Homo sapiens

<400> 3153

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&lt;210&gt; 3154

&lt;211&gt; 65

&lt;212&gt; PRT

<213> Homo sapiens

<400> 3154

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 Ser Gly His Arg Trp Gly Ile Thr Leu Pro Thr Arg Asp Ser Arg His  
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 Gly Leu Leu Gly Leu Gln Ala Pro Trp Gly Ser Arg Gly Lys Pro Gln  
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 Gly  
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<210> 3155

<211> 551

<212> DNA

<213> Homo sapiens

<400> 3155

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<210> 3156

<211> 178

<212> PRT

<213> Homo sapiens

<400> 3156

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 Thr Ala Ser Thr Asn Cys Asp Ser Ser Ser Glu Gly Leu Glu Lys Asp  
 35 40 45  
 Thr Ala Thr Gln Arg Ser Asp Gln Thr Cys Leu Glu Pro Ser Cys Ser

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Cys Ser Ser Glu Asn Gln Glu Cys Gln Thr Ala	Ala Ser Pro Gly Glu			
65	70	75	80	
Ile Leu Glu Ile Leu Lys Lys Gly Lys Ala Phe Val Leu Asp Ile Asp				
	85	90	95	
Leu Asp Phe Phe Ser Val Lys Asn Pro Phe Lys Lys Met Phe Thr Gln				
	100	105	110	
Glu Glu Tyr Lys Ile Leu Gln Glu Leu Tyr Gln Phe Lys Lys Pro Gly				
	115	120	125	
Thr Asn Leu Thr Glu Glu Asp Leu Val Asp Ile Val Asp Thr Arg Ile				
	130	135	140	
His Gln Leu Glu Asp Leu Glu Ala Thr Phe Ala Asp Leu Cys Asp Gly				
145	150	155	160	
Asp Asp Glu Glu Thr Val Gln Gly Trp Ala Ser Asn Pro Gly Met Glu				
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Ser Leu				

&lt;210&gt; 3157

&lt;211&gt; 903

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3157

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903

<210> 3158  
<211> 92  
<212> PRT  
<213> Homo sapiens

<400> 3158  
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Thr Glu Pro Pro Thr Pro Glu Pro Gly Pro Lys Thr Pro Pro Arg Thr  
35 40 45  
Met Gln Glu Ser Pro Leu Gly Leu Gln Val Lys Glu Glu Ser Glu Val  
50 55 60  
Thr Glu Asp Ser Asp Phe Leu Glu Ser Gly Pro Leu Ala Ala Thr Gln  
65 70 75 80  
Glu Ser Val Pro Thr Leu Leu Pro Glu Glu Ala Gln  
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<210> 3159  
<211> 2408  
<212> DNA  
<213> Homo sapiens

<400> 3159  
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2408

<210> 3160

<211> 431

<212> PRT

<213> Homo sapiens

<400> 3160

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			20					25					30		
Glu	Lys	Leu	Leu	Glu	Lys	Tyr	Met	Asp	Glu	Asp	Gly	Glu	Trp	Trp	Ile
		35					40					45			
Ala	Lys	Gln	Arg	Gly	Lys	Arg	Ala	Ile	Thr	Asp	Asn	Asp	Met	Gln	Ser
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Ile	Leu	Asp	Leu	His	Asn	Lys	Leu	Arg	Ser	Gln	Val	Tyr	Pro	Thr	Ala
65					70				75						80
Ser	Asn	Met	Glu	Tyr	Met	Thr	Trp	Asp	Val	Glu	Leu	Glu	Arg	Ser	Ala
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Glu	Ser	Trp	Ala	Glu	Ser	Cys	Leu	Trp	Glu	His	Gly	Pro	Ala	Ser	Leu
			100					105					110		
Leu	Pro	Ser	Ile	Gly	Gln	Asn	Leu	Gly	Ala	His	Trp	Gly	Arg	Tyr	Arg
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Pro	Pro	Thr	Phe	His	Val	Gln	Ser	Trp	Tyr	Asp	Glu	Val	Lys	Asp	Phe
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Ser	Tyr	Pro	Tyr	Glu	His	Glu	Cys	Asn	Pro	Tyr	Cys	Pro	Phe	Arg	Cys
145					150				155						160
Ser	Gly	Pro	Val	Cys	Thr	His	Tyr	Thr	Gln	Val	Val	Trp	Ala	Thr	Ser
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Asn	Arg	Ile	Gly	Cys	Ala	Ile	Asn	Leu	Cys	His	Asn	Met	Asn	Ile	Trp
			180					185					190		
Gly	Gln	Ile	Trp	Pro	Lys	Ala	Val	Tyr	Leu	Val	Cys	Asn	Tyr	Ser	Pro
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Lys	Gly	Asn	Trp	Trp	Gly	His	Ala	Pro	Tyr	Lys	His	Gly	Arg	Pro	Cys
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Ser	Ala	Cys	Pro	Pro	Ser	Phe	Gly	Gly	Gly	Cys	Arg	Glu	Asn	Leu	Cys
225					230					235					240
Tyr	Lys	Glu	Gly	Ser	Asp	Arg	Tyr	Tyr	Pro	Pro	Arg	Glu	Glu	Glu	Thr
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Asn	Glu	Ile	Glu	Arg	Gln	Gln	Ser	Gln	Val	His	Asp	Thr	His	Val	Arg
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Thr	Arg	Ser	Asp	Asp	Ser	Ser	Arg	Asn	Glu	Val	Ile	Ser	Ala	Gln	Gln
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Gly	Thr	Thr	Cys	Asn	Arg	Tyr	Glu	Cys	Pro	Ala	Gly	Cys	Leu	Asp	Ser
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Lys	Ala	Lys	Val	Ile	Gly	Ser	Val	His	Tyr	Glu	Met	Gln	Ser	Ser	Ile
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Cys	Arg	Ala	Ala	Ile	His	Tyr	Gly	Ile	Ile	Asp	Asn	Asp	Gly	Gly	Trp
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<210> 3161  
<211> 1197  
<212> DNA  
<213> Homo sapiens

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<210> 3162

<211> 386

<212> PRT

<213> Homo sapiens

<400> 3162

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			20					25					30		
Ile	Thr	Ala	Ser	Ser	Asn	Lys	Ser	Leu	Asn	Leu	Leu	Lys	Ile	Lys	His
		35					40					45			
Gly	Asp	Leu	Leu	Phe	Leu	Phe	Pro	Ser	Ser	Leu	Ala	Gly	Pro	Ser	Ser
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Asn	Val	Val	Glu	Asp	Glu	Ile	Asp	Gln	Tyr	Leu	Ser	Lys	Gln	Asp	Gly
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Lys	Ile	Tyr	Arg	Ser	Arg	Asp	Pro	Gln	Leu	Cys	Arg	His	Gly	Pro	Leu
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Gly	Lys	Cys	Val	His	Cys	Val	Pro	Leu	Glu	Pro	Phe	Asp	Glu	Asp	Tyr
		115					120					125			
Leu	Asn	His	Leu	Glu	Pro	Pro	Val	Lys	His	Met	Ser	Phe	His	Ala	Tyr
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Ile	Arg	Lys	Leu	Thr	Gly	Gly	Ala	Asp	Lys	Gly	Lys	Phe	Val	Ala	Leu
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Glu	Asn	Ile	Ser	Cys	Lys	Ile	Lys	Ser	Gly	Cys	Glu	Gly	His	Leu	Pro
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Trp	Pro	Asn	Gly	Ile	Cys	Thr	Lys	Cys	Gln	Pro	Ser	Ala	Ile	Thr	Leu
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Asn	Arg	Gln	Lys	Tyr	Arg	His	Val	Asp	Asn	Ile	Met	Phe	Glu	Asn	His
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Thr	Val	Ala	Asp	Arg	Phe	Leu	Asp	Phe	Trp	Arg	Lys	Thr	Gly	Asn	Gln
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			260					265					270		
Val	Asp	Glu	Ile	Ala	Ala	Lys	Leu	Gly	Leu	Arg	Lys	Val	Gly	Trp	Ile
	275					280						285			
Phe	Thr	Asp	Leu	Val	Ser	Glu	Asp	Thr	Arg	Lys	Gly	Thr	Val	Arg	Tyr
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Ser	Arg	Asn	Lys	Asp	Thr	Tyr	Phe	Leu	Ser	Ser	Glu	Glu	Cys	Ile	Thr
305					310					315					320
Ala	Gly	Asp	Phe	Gln	Asn	Lys	His	Pro	Asn	Met	Cys	Arg	Leu	Ser	Pro
			325					330					335		
Asp	Gly	His	Phe	Gly	Ser	Lys	Phe	Val	Thr	Ala	Val	Ala	Thr	Gly	Gly
		340						345					350		
Pro	Asp	Asn	Gln	Val	His	Phe	Glu	Gly	Tyr	Gln	Val	Ser	Asn	Gln	Cys

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370 375 380  
Val Cys  
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<210> 3163  
<211> 1075  
<212> DNA  
<213> Homo sapiens

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<210> 3164  
<211> 94  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 3164

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 Ser Ser Val Pro Pro Arg Gln Ala Cys Ala Ser Pro Ala Ser Cys Ser  
 35 40 45  
 Ser Ser Ala Ala Xaa Ala Ser Ala Ser Thr Gly Pro Trp His Ser Gly  
 50 55 60  
 Cys Gly Ser Ser Cys Gly Ser Cys Cys Cys Trp Gly Ser Pro Ser Ala  
 65 70 75 80  
 Ser Val Gly Val Gly Ala Gly Ala Ile Arg Ser Arg Thr Val  
 85 90

&lt;210&gt; 3165

&lt;211&gt; 2413

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3165

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2413

&lt;210&gt; 3166

&lt;211&gt; 717

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens



&lt;400&gt; 3166

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          35          40          45
Ala Glu Trp Asp Gln Val Thr Val Tyr Leu Phe Cys Asp Asp His Lys
          50          55          60
Leu Gln Arg Tyr Ala Leu Asn Arg Ile Thr Val Trp Arg Ser Arg Ser
65          70          75          80
Gly Asn Glu Leu Pro Leu Ala Val Ala Ser Thr Ala Asp Leu Ile Arg
          85          90          95
Cys Lys Leu Leu Asp Val Thr Gly Gly Leu Gly Thr Asp Glu Leu Arg
          100          105          110
Leu Leu Tyr Gly Met Ala Leu Val Arg Phe Val Asn Leu Ile Ser Glu
          115          120          125
Arg Lys Thr Lys Phe Ala Lys Val Pro Leu Lys Cys Leu Ala Gln Glu
          130          135          140
Val Asn Ile Pro Asp Trp Ile Val Asp Leu Arg His Glu Leu Thr His
145          150          155          160
Lys Lys Met Pro His Ile Asn Asp Cys Arg Arg Gly Cys Tyr Phe Val
          165          170          175
Leu Asp Trp Leu Gln Lys Thr Tyr Trp Cys Arg Gln Leu Glu Asn Ser
          180          185          190
Leu Arg Glu Thr Trp Glu Leu Glu Glu Phe Arg Glu Gly Ile Glu Glu
          195          200          205
Glu Asp Gln Glu Glu Asp Lys Asn Ile Val Val Asp Asp Ile Thr Glu
          210          215          220
Gln Lys Pro Glu Pro Gln Asp Asp Gly Lys Ser Thr Glu Ser Asp Val
225          230          235          240
Lys Ala Asp Gly Asp Ser Lys Gly Ser Glu Glu Val Asp Ser His Cys
          245          250          255
Lys Lys Ala Leu Ser His Lys Glu Leu Tyr Glu Arg Ala Arg Glu Leu
          260          265          270
Leu Val Ser Tyr Glu Glu Glu Gln Phe Thr Val Leu Glu Lys Phe Arg
          275          280          285
Tyr Leu Pro Lys Ala Ile Lys Ala Trp Asn Asn Pro Ser Pro Arg Val
          290          295          300
Glu Cys Val Leu Ala Glu Leu Lys Gly Val Thr Cys Glu Asn Arg Glu
305          310          315          320
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Arg Tyr Ser Val Ser Leu Leu Gly Tyr Gly Phe Tyr Gly Asp Ile Ile
65           70           75           80
Lys Asp Ser Glu Lys Lys Arg Trp Leu Gly Leu Ala Arg Tyr Asp Phe
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Ser Gly Leu Lys Thr Phe Leu Ser His His Cys Tyr Glu Gly Thr Val
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           115          120          125
Pro Cys Arg Ala Gly Cys Phe Val Cys Arg Gln Ser Lys Gln Gln Leu
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Glu Glu Glu Gln Lys Lys Ala Leu Tyr Gly Leu Glu Ala Ala Glu Asp
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Val Glu Glu Trp Gln Val Val Cys Gly Lys Phe Leu Ala Ile Asn Ala
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Thr Asn Met Ser Cys Ala Cys Arg Arg Ser Pro Arg Gly Leu Ser Pro
           180          185          190
Ala Ala His Leu Gly Asp Gly Ser Ser Asp Leu Ile Leu Ile Arg Lys
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Cys Ser Arg Phe Asn Phe Leu Arg Phe Leu Ile Trp His Glu Val Cys
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<210> 3173

<211> 573

<212> DNA

<213> Homo sapiens

<400> 3173

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420

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 Val Ala Gln Tyr Phe Arg Glu Lys Tyr Thr Leu Gln Leu Lys Tyr Pro  
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 His Leu Pro Cys Leu Gln Val Gly Gln Glu Gln Lys His Thr Tyr Leu  
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<212> PRT

<213> Homo sapiens

<400> 3176

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Pro	Asp	Ala	Trp	Gly	Leu	Pro	Thr	Pro	Gln	Gln	Ala	Arg	Gly	Lys	Ala
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	50					55					60				
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<211> 1857

<212> DNA

<213> Homo sapiens

<400> 3177

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&lt;210&gt; 3178

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 His Pro Lys Thr Cys Pro Val Val Leu Pro Pro Glu Thr Arg Pro Leu  
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 Asn Gly Leu Gly Pro Pro Ser Thr Pro Leu Asp His Arg Gly Tyr Gln  
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 Ser Leu Ser Asp Ser Pro Pro Gly Ala Arg Val Phe Thr Glu Ser Glu  
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 <212> DNA  
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<212> DNA  
<213> Homo sapiens

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<212> PRT  
<213> Homo sapiens

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&lt;210&gt; 3183

&lt;211&gt; 1457

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3183

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 35 40 45  
 Leu Ser Trp Asn Leu Leu Gly Asp Glu Ala Ala Ala Glu Leu Ala Gln  
 50 55 60  
 Val Leu Pro Gln Met Gly Arg Leu Lys Arg Val Asp Leu Glu Lys Asn  
 65 70 75 80  
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 85 90 95  
 Gly Ser Ser Ile Gln Val Ile Arg Leu Trp Asn Asn Pro Ile Pro Cys  
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 Asp Met Ala Gln His Leu Lys Ser Gln Glu Pro Arg Leu Asp Phe Ala  
 115 120 125  
 Phe Phe Asp Asn Gln Pro Gln Ala Pro Trp Gly Thr  
 130 135 140

<210> 3185  
 <211> 1433  
 <212> DNA  
 <213> Homo sapiens

<400> 3185  
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 240  
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 420  
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 660  
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 780  
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 1433

&lt;210&gt; 3186

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3186

Met	Pro	Leu	Leu	Trp	Phe	Val	Gln	Val	Thr	Gly	Val	Pro	Arg	Pro	Leu
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His	Asp	Gln	His	Pro	Val	Val	Gly	Gln	Leu	Leu	Gln	Val	Leu	Lys	Ala
			20					25					30		
Gly	Leu	Thr	His	Gly	Val	Leu	Val	Ser	Ile	Tyr	Asn	Gln	Ser	Trp	Ser
		35					40					45			
Leu	Arg	Gly	Arg	Ile	Gly	Gly	Trp	Gly	Arg	Val	Asn	Arg	Thr	Cys	His
	50					55					60				
Ser	Ile	Pro	Ser	Pro	Pro	His	Phe	Ser	Leu	Phe	Leu	Gly	Pro	Pro	His
65					70				75				80		
Met	Arg	Glu	Arg	Asp	Lys	Leu	Ala	Gln	Trp	Val	Gly	Ala	Gln	Ile	Gly

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Val Cys Pro Arg Thr Gln Phe Ser Thr Gly Leu Gly Thr Val Val Cys					
	100		105		110

<210> 3187  
 <211> 860  
 <212> DNA  
 <213> Homo sapiens

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<210> 3188  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

<400> 3188  
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 Glu Val Val Leu Pro Asp Pro Val Glu Glu Thr Arg His His Ala Glu  
 35 40 45  
 Val Val Lys Lys Val Asn Glu Met Ile Val Thr Gly Gln Tyr Gly Arg

50		55		60
Leu Phe Ala Val Val His Phe Ala Ser Arg Gln Trp Lys Val Thr Ser				
65		70		75
Glu Asp Leu Ile Leu Ile Gly Asn Glu Leu Asp Leu Ala Cys Gly Glu				80
	85		90	
Arg Ile Arg Leu Glu Lys Val Leu Leu Val Gly Ala Asp Asn Phe Thr				95
	100		105	
Leu Leu Gly Lys Pro Leu Leu Gly				110
	115		120	

&lt;210&gt; 3189

&lt;211&gt; 440

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3189

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440

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&lt;210&gt; 3190

&lt;211&gt; 111

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3190

Gly His Gly Trp Gly Arg Thr Leu Ala Trp Leu Ser Thr Arg Gly Leu				
1	5		10	15
Ser Leu Gly Lys Gln Val Pro Val Phe Ser Thr Thr Cys Ile Pro Gln				
	20		25	30
Gly Ser Ile Leu Asp Ser Pro Ser Gly Pro Val Leu Pro Cys Phe Leu				
	35		40	45
Cys Leu Phe Gln Gly Val Leu Ser Asp Leu Thr Lys Val Thr Arg Met				
	50		55	60
His Gly Ile Asp Pro Val Val Leu Val Leu Met Val Gly Met Val Met				
65	70		75	80
Phe Thr Leu Gly Phe Ala Gly Cys Val Gly Ala Leu Arg Glu Asn Ile				
	85		90	95
Cys Leu Leu Asn Phe Val Ser Gly His Arg Asp Lys Ser Gly Ile				
	100		105	110

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 <212> DNA  
 <213> Homo sapiens

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 266

<210> 3192  
 <211> 84  
 <212> PRT  
 <213> Homo sapiens

<400> 3192  
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 Pro Arg Arg Leu Arg Lys Cys Gly Leu Ser Cys Cys Ser Leu Arg Ser  
 35 40 45  
 Arg Glu Ser Lys Asp Asp Pro Trp Gln Phe Ser Asp Cys Arg Lys Arg  
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 Ser Arg Ser Met Ala Gln Val Ala Asp Thr Glu Gln Gly Thr Ile Ser  
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 Pro Ser Ala Ser

<210> 3193  
 <211> 567  
 <212> DNA  
 <213> Homo sapiens

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 240  
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 300  
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 360



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<210> 3194  
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 Asn Tyr Cys Leu Pro Tyr Val Val Pro Val Gly Thr Pro Gly Ala Ala  
 35 40 45  
 Gly Leu Val Ile Pro Leu Phe Pro Cys Arg Pro Arg Phe Thr Tyr Phe  
 50 55 60  
 Pro Phe Ser Leu Gly His Arg Ser Cys Ile Gly Gln Gln Phe Ala Gln  
 65 70 75 80  
 Met Glu Val Lys Val Val Met Ala Lys Leu Leu Gln Arg Leu Glu Phe  
 85 90 95  
 Arg Leu Val Pro Gly Gln Arg Phe Gly Leu Gln Glu Gln Ala Thr Leu  
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 Lys Pro Leu Asp  
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<210> 3195  
 <211> 987  
 <212> DNA  
 <213> Homo sapiens

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 987

&lt;210&gt; 3196

&lt;211&gt; 153

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3196

Met	Glu	Glu	Pro	Leu	Gly	Ser	Asp	Pro	Phe	Ser	Trp	Lys	Leu	Pro	Ser
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Leu	Asp	Tyr	Glu	Arg	Lys	Thr	Lys	Val	Asp	Phe	Asp	Asp	Phe	Leu	Pro
			20					25					30		
Ala	Ile	Arg	Lys	Pro	Gln	Thr	Pro	Thr	Ser	Leu	Ala	Gly	Ser	Ala	Lys
			35					40				45			
Gly	Gly	Gln	Asp	Gly	Ser	Gln	Arg	Ser	Ser	Ile	His	Phe	Glu	Thr	Glu
			50			55					60				
Glu	Ala	Asn	Arg	Ser	Phe	Leu	Ser	Gly	Ile	Lys	Thr	Ile	Leu	Lys	Lys
					70					75				80	
Ser	Pro	Glu	Pro	Lys	Glu	Asp	Pro	Ala	His	Leu	Ser	Asp	Ser	Ser	Ser
				85					90					95	
Ser	Ser	Gly	Ser	Ile	Val	Ser	Phe	Lys	Ser	Ala	Asp	Ser	Ile	Lys	Ser
			100					105					110		
Arg	Pro	Gly	Ile	Pro	Arg	Leu	Ala	Gly	Asp	Gly	Gly	Glu	Arg	Thr	Ser
			115				120					125			
Pro	Glu	Arg	Arg	Glu	Pro	Gly	Thr	Gly	Arg	Lys	Asp	Asp	Asp	Val	Ala
			130			135					140				
Ser	Ile	Met	Lys	Lys	Tyr	Leu	Gln	Lys							
145					150										

&lt;210&gt; 3197

&lt;211&gt; 5575

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3197

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&lt;210&gt; 3198

&lt;211&gt; 833

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3198

Met	Ala	Thr	Leu	Asp	Arg	Lys	Val	Pro	Ser	Pro	Glu	Ala	Phe	Leu	Gly
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Lys	Pro	Trp	Ser	Ser	Trp	Ile	Asp	Ala	Ala	Lys	Leu	His	Cys	Ser	Asp
			20					25					30		
Asn	Val	Asp	Leu	Glu	Glu	Ala	Gly	Lys	Glu	Gly	Gly	Lys	Ser	Arg	Glu
		35					40					45			
Val	Met	Arg	Leu	Asn	Lys	Glu	Asp	Met	His	Leu	Phe	Gly	His	Tyr	Pro
	50					55					60				
Ala	His	Asp	Asp	Phe	Tyr	Leu	Val	Val	Cys	Ser	Ala	Cys	Asn	Gln	Val
65					70					75				80	
Val	Lys	Pro	Gln	Val	Phe	Gln	Ser	His	Cys	Glu	Arg	Arg	His	Gly	Ser
			85						90					95	
Met	Cys	Arg	Pro	Ser	Pro	Ser	Pro	Val	Ser	Pro	Ala	Ser	Asn	Pro	Arg
			100					105					110		
Thr	Ser	Leu	Val	Gln	Val	Lys	Thr	Lys	Ala	Cys	Leu	Ser	Gly	His	His
		115				120						125			
Ser	Ala	Ser	Ser	Thr	Ser	Lys	Pro	Phe	Lys	Thr	Pro	Lys	Asp	Asn	Leu
	130					135					140				
Leu	Thr	Ser	Ser	Ser	Lys	Gln	His	Thr	Val	Phe	Pro	Ala	Lys	Gly	Ser
145					150				155					160	
Arg	Asp	Lys	Pro	Cys	Val	Pro	Val	Pro	Val	Val	Ser	Leu	Glu	Lys	Ile
			165					170					175		
Pro	Asn	Leu	Val	Lys	Ala	Asp	Gly	Ala	Asn	Val	Lys	Met	Asn	Ser	Thr
		180					185					190			
Thr	Thr	Thr	Ala	Val	Ser	Ala	Ser	Pro	Thr	Ser	Ser	Ser	Ala	Val	Ser



195	200	205
Thr Pro Pro Leu Ile Lys	Pro Val Leu Met Ser Lys	Ser Val Pro Pro
210	215	220
Ser Pro Glu Lys Ile Leu	Asn Gly Lys Gly Ile Leu	Pro Thr Thr Ile
225	230	235
Asp Lys Lys His Gln Asn	Gly Thr Lys Asn Ser Asn	Lys Pro Tyr Arg
245	250	255
Arg Leu Ser Glu Arg Glu	Phe Asp Pro Asn Lys His	Cys Gly Val Leu
260	265	270
Asp Pro Glu Thr Lys Lys	Pro Cys Thr Arg Ser Leu	Thr Cys Lys Thr
275	280	285
His Ser Leu Ser His Arg	Arg Ala Val Pro Gly Arg	Lys Lys Gln Phe
290	295	300
Asp Leu Leu Leu Ala Glu	His Lys Ala Lys Ser Arg	Glu Lys Glu Val
305	310	315
Lys Asp Lys Glu His Leu	Leu Thr Ser Thr Arg Glu	Ile Leu Pro Ser
325	330	335
Gln Ser Gly Pro Ala Gln	Asp Ser Leu Leu Gly Ser	Ser Gly Ser Ser
340	345	350
Gly Pro Glu Pro Lys Val	Ala Ser Pro Ala Lys Ser	Arg Pro Pro Asn
355	360	365
Ser Val Leu Pro Arg Pro	Ser Ser Ala Asn Ser Ile	Ser Ser Ser Thr
370	375	380
Ser Ser Asn His Ser Gly	His Thr Pro Glu Pro Pro	Leu Pro Pro Val
385	390	395
Gly Gly Asp Leu Ala Ser	Arg Leu Ser Ser Asp Glu	Gly Glu Met Asp
405	410	415
Gly Ala Asp Glu Ser Glu	Lys Leu Asp Cys Gln Phe	Ser Thr His His
420	425	430
Pro Arg Pro Leu Ala Phe	Cys Ser Phe Gly Ser Arg	Leu Met Gly Arg
435	440	445
Gly Tyr Tyr Val Phe Asp	Arg Arg Trp Asp Arg Phe	Arg Phe Ala Leu
450	455	460
Asn Ser Met Val Glu Lys	His Leu Asn Ser Gln Met	Trp Lys Lys Ile
465	470	475
Pro Pro Ala Ala Asp Ser	Pro Met Pro Ser Pro Ala	Ala His Ile Thr
485	490	495
Thr Pro Val Pro Ala Ser	Val Leu Gln Pro Phe Ser	Asn Pro Ser Ala
500	505	510
Val Tyr Leu Pro Ser Ala	Pro Ile Ser Ser Arg Leu	Thr Ser Ser Tyr
515	520	525
Ile Met Thr Ser Ala Met	Leu Ser Asp Ala Ala Phe	Val Thr Ser Pro
530	535	540
Asp Pro Ser Ala Leu Met	Ser His Thr Thr Ala Phe	Pro His Val Ala
545	550	555
Ala Thr Leu Ser Ile Met	Asp Ser Thr Phe Lys Ala	Pro Ser Ala Val
565	570	575
Ser Pro Ile Pro Ala Val	Ile Pro Ser Pro Ser His	Lys Pro Ser Lys
580	585	590
Thr Lys Thr Ser Lys Ser	Ser Lys Val Lys Asp Leu	Ser Thr Arg Ser
595	600	605
Asp Glu Ser Pro Ser Asn	Lys Lys Arg Lys Pro Gln	Ser Ser Thr Ser
610	615	620
Ser Ser Ser Ser Ser Ser	Ser Ser Ser Leu Gln Thr	Ser Leu Ser Ser



625                                      630                                      635                                      640  
 Pro Leu Ser Gly Pro His Lys Lys Asn Cys Val Leu Asn Ala Ser Ser  
    645                                      650                                      655  
 Ala Leu Asn Ser Tyr Gln Ala Ala Pro Pro Tyr Asn Ser Leu Ser Val  
    660                                      665                                      670  
 His Asn Ser Asn Asn Gly Val Ser Pro Leu Ser Ala Lys Leu Glu Pro  
    675                                      680                                      685  
 Ser Gly Arg Thr Ser Leu Pro Gly Gly Pro Ala Asp Ile Val Arg Gln  
    690                                      695                                      700  
 Val Gly Ala Val Gly Gly Ser Ser Asp Ser Cys Pro Leu Ser Val Pro  
 705                                      710                                      715                                      720  
 Ser Leu Ala Leu His Ala Gly Asp Leu Ser Leu Ala Ser His Asn Ala  
    725                                      730                                      735  
 Val Ser Ser Leu Pro Leu Ser Phe Asp Lys Ser Glu Gly Lys Lys Arg  
    740                                      745                                      750  
 Lys Asn Ser Ser Ser Ser Ser Lys Ala Cys Lys Ile Thr Lys Met Pro  
    755                                      760                                      765  
 Gly Met Asn Ser Val His Lys Lys Asn Pro Pro Ser Leu Leu Ala Pro  
    770                                      775                                      780  
 Val Pro Asp Pro Val Asn Ser Thr Ser Ser Arg Gln Val Gly Lys Asn  
 785                                      790                                      795                                      800  
 Ser Ser Leu Ala Leu Ser Gln Ser Ser Pro Ser Ser Ile Ser Ser Pro  
    805                                      810                                      815  
 Gly His Ser Arg Gln Asn Thr Asn Arg Thr Gly Arg Ile Arg Thr Leu  
    820                                      825                                      830  
 Pro

&lt;210&gt; 3199

&lt;211&gt; 777

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3199

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 120  
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 180  
 aggaaccgca agggcccaaa gagagtgtca cagccctggc ttagggagct cctaggtctg  
 240  
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 300  
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 360  
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ccccagcct tcagggcctc cctggcctga aggtgggcct caccagggac tcaccccctt  
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<210> 3200  
<211> 92  
<212> PRT  
<213> Homo sapiens

<400> 3200  
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1 5 10 15  
Leu Leu Phe Gly Gln Pro Arg Pro Arg Ser Ser Leu Ser Gln Gly Cys  
20 25 30  
Asp Thr Leu Phe Gly Ala Leu Arg Phe Leu Ala Ser Pro Ser Phe Trp  
35 40 45  
Val Ser Pro Arg Ser Pro Val Pro Ala Val Gly Ala Ala Cys Cys Met  
50 55 60  
Pro Gly Pro Ala Thr Ala Ser Gln Arg Ala Gly Ala Leu Thr Ser Thr  
65 70 75 80  
Trp Ser Cys Leu Pro His Cys Ser Ser Arg Arg Val  
85 90

<210> 3201  
<211> 390  
<212> DNA  
<213> Homo sapiens

<400> 3201  
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120  
gaagccgaca gcctttggga ccgaggtcag cagctgcacc ggcgcaagaa ttccaaacac  
180  
agctgtggct gaagggcctg ggggtgtgca ggtcccaaac cccagtgagc ctgatcccga  
240  
catgggtcct gtctcctggg ggccaccttt gtgtcccgtg gtggctgacc ctgagaggga  
300  
gggctgtggg gatgctcaca tgacactggg gtcccagcga cagccctcc tcacgctgcg  
360  
tgtccctggg gcctctcagg agggacgcgt  
390

<210> 3202  
<211> 116  
<212> PRT  
<213> Homo sapiens

<400> 3202  
Met Gly Thr Arg Lys Gln Leu Pro Ser Arg Leu Pro Gln Ala Gly Arg

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Lys Gly His Ala Ala Ala Gly Val Ser Thr Ala Lys Pro Thr Ala Phe			
	20	25	30
Gly Thr Glu Val Ser Ser Cys Thr Gly Ala Arg Ile Pro Asn Thr Ala			
	35	40	45
Val Ala Glu Gly Pro Gly Gly Val Gln Val Pro Asn Pro Ser Glu Pro			
	50	55	60
Asp Pro Asp Met Gly Pro Val Ser Trp Gly Pro Pro Leu Cys Pro Val			
65	70	75	80
Val Ala Asp Pro Glu Arg Glu Gly Cys Gly Asp Ala His Met Thr Leu			
	85	90	95
Gly Ser Gln Arg Gln Pro Leu Leu Thr Leu Arg Val Pro Gly Ala Ser			
	100	105	110
Gln Glu Gly Arg			
115			

&lt;210&gt; 3203

&lt;211&gt; 1906

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3203

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120
cacggtggca gcattgagag ttggacaccc gggtccttga agtgatctct aggccccagc
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240
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420
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540
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960

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 1080  
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 1200  
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 1260  
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 1800  
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 1860  
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 1906

&lt;210&gt; 3204

&lt;211&gt; 424

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3204

Met	Ala	Pro	Glu	Glu	Asp	Ala	Gly	Gly	Glu	Ala	Leu	Gly	Gly	Ser	Phe
1				5					10					15	
Trp	Glu	Ala	Gly	Asn	Tyr	Arg	Arg	Thr	Val	Gln	Arg	Val	Glu	Asp	Gly
			20					25					30		
His	Arg	Leu	Cys	Gly	Asp	Leu	Val	Ser	Cys	Phe	Gln	Glu	Arg	Ala	Arg
		35					40					45			
Ile	Glu	Lys	Ala	Tyr	Ala	Gln	Gln	Leu	Ala	Asp	Trp	Ala	Arg	Lys	Trp
	50					55				60					
Arg	Gly	Thr	Val	Glu	Lys	Gly	Pro	Gln	Tyr	Gly	Thr	Leu	Glu	Lys	Ala
65				70				75					80		
Trp	His	Ala	Phe	Phe	Thr	Ala	Ala	Glu	Arg	Leu	Ser	Ala	Leu	His	Leu
			85					90					95		
Glu	Val	Arg	Glu	Lys	Leu	Gln	Gly	Gln	Asp	Ser	Glu	Arg	Val	Arg	Ala
		100					105				110				
Trp	Gln	Arg	Gly	Ala	Phe	His	Arg	Pro	Val	Leu	Gly	Gly	Phe	Arg	Glu

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<210> 3205
<211> 1482
<212> DNA
<213> Homo sapiens
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120
ctgttgccacc ccacaggaga gccccggagc tatgtggagt ctgtggcacg gacagcggtg
180
gctggacccc gagctcagga ctctgagccc aagagcttta gtgctccagc caccagggc
240
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 360  
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 900  
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 960  
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 1020  
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 1320  
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 1380  
 cccgacttct ccaagtactc catgccagac aacagcccgg agacgcgggc taaagtgaag  
 1440  
 tttgtccagg acacttctaa gtattggtac aagcctaaga tc  
 1482

&lt;210&gt; 3206

&lt;211&gt; 494

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3206

Xaa	Glu	Met	Glu	Gly	Thr	Ser	Pro	Ser	Ser	Pro	Pro	Pro	Ser	Gly	Val
1			5					10					15		
Arg	Ser	Pro	Pro	Gly	Leu	Ala	Lys	Thr	Pro	Leu	Ser	Ala	Leu	Gly	Leu
		20					25					30			
Lys	Pro	His	Asn	Pro	Ala	Asp	Ile	Leu	Leu	His	Pro	Thr	Gly	Glu	Pro



2418



&lt;400&gt; 3209

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 120  
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 180  
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 240  
 gtctgtcttg gcccggtgtg tcacctgtg ttcattctctc tcccagccat ggctctcaa  
 300  
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 346

&lt;210&gt; 3210

&lt;211&gt; 95

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3210

Met	Arg	Pro	Ala	Leu	Ser	Leu	Leu	Thr	Trp	Ala	Leu	Pro	Thr	Gly	Lys
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Cys	Ser	His	Ser	Arg	Arg	Ile	Ser	Pro	Thr	Val	Gln	Gly	Cys	Val	Ser
			20					25					30		
Gly	Glu	Arg	Ala	Leu	Gly	Ser	Cys	Gly	Asn	Gln	Gly	Pro	Pro	Ile	Leu
		35				40					45				
Val	Pro	Val	Ile	Gly	Cys	Ile	Pro	Ser	Ser	Cys	Leu	Cys	Leu	Ser	Trp
	50				55					60					
Pro	Val	Trp	Ser	Pro	Cys	Val	His	Leu	Ser	Pro	Ser	His	Gly	Leu	Ser
65				70				75						80	
Asn	Trp	Gly	Phe	Arg	Leu	Pro	Met	Arg	Gly	Ser	Trp	Tyr	Val	Arg	
			85					90					95		

&lt;210&gt; 3211

&lt;211&gt; 1728

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3211

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 240  
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 960  
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 1080  
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 1620  
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 1680  
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 1728

&lt;210&gt; 3212

&lt;211&gt; 87

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3212

Ser Gly Asn Ile Lys Leu Ser Tyr Gln Phe Ser Glu Ile His Glu Asp  
 1 5 10 15  
 Ser Thr Val Cys Trp Thr Lys Asp Ser Lys Ser Ile Ala Gln Ala Lys

		20						25					30				
Lys	Ser	Ala	Gly	Asp	Asn	Ser	Ser	Val	Ser	Leu	Ala	Ile	Val	Gln	Ala		
		35						40					45				
Ser	Pro	Lys	Asp	Gln	Gly	Leu	Tyr	Tyr	Cys	Cys	Ile	Lys	Asn	Ser	Tyr		
		50						55				60					
Gly	Lys	Val	Thr	Ala	Glu	Phe	Asn	Leu	Thr	Ala	Glu	Val	Leu	Lys	Gln		
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 <212> DNA  
 <213> Homo sapiens

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 120  
 gataaacatg cccaactcat cttggcccaa atcaataaga tgagaaatgg acagcatttc  
 180  
 tgtgatgtgc agctgcaagt tggacaggaa agtttttaaag ctcacggct ggttttggt  
 240  
 gccagcagtc cttactttgc agctttgttc actggaggaa tgaaagagtc ctcaaaagat  
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<210> 3214  
 <211> 92  
 <212> PRT  
 <213> Homo sapiens

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			20					25					30				
Gly	Gln	His	Phe	Cys	Asp	Val	Gln	Leu	Gln	Val	Gly	Gln	Glu	Ser	Phe		
		35						40				45					
Lys	Ala	His	Arg	Leu	Val	Leu	Ala	Ala	Ser	Ser	Pro	Tyr	Phe	Ala	Ala		
		50					55				60						
Leu	Phe	Thr	Gly	Gly	Met	Lys	Glu	Ser	Ser	Lys	Asp	Val	Val	Pro	Ile		
65					70					75					80		
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<210> 3215  
 <211> 597  
 <212> DNA  
 <213> Homo sapiens

<400> 3215

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 accttcaagt tcgacttgga cggggacgca cccgatgaaa ttgccacgta tatgggtggag  
 180  
 catgacttta tcttgcaggc cgagcgggaa acgttcatcg agcagatgaa ggatgtcatg  
 240  
 gacaaggcag aggacatgct cagcaggagc acagacgccg accgtggctc cgacccaggg  
 300  
 accagcccgc cacacctcag cacctgcggc ctggggcaccg gggaggagag ccgacaatcc  
 360  
 caagccaacg cccccgtgta tcagcagaac gtcttcgaca ccgggaagag gtggttcatc  
 420  
 atctgtccgg tgcctgagcc ccccgccccc gagggccctt gaatcttcgc cccacttcc  
 480  
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 597

&lt;210&gt; 3216

&lt;211&gt; 153

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3216

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Ile	Leu	Asn	Val	Cys	Asn	Thr	Gly	Asp	Lys	Met	Val	Glu	Cys	Gln	Leu
			20					25					30		
Glu	Thr	His	Asn	His	Lys	Met	Val	Thr	Phe	Lys	Phe	Asp	Leu	Asp	Gly
		35					40					45			
Asp	Ala	Pro	Asp	Glu	Ile	Ala	Thr	Tyr	Met	Val	Glu	His	Asp	Phe	Ile
	50					55					60				
Leu	Gln	Ala	Glu	Arg	Glu	Thr	Phe	Ile	Glu	Gln	Met	Lys	Asp	Val	Met
65					70					75				80	
Asp	Lys	Ala	Glu	Asp	Met	Leu	Ser	Glu	Asp	Thr	Asp	Ala	Asp	Arg	Gly
			85						90				95		
Ser	Asp	Pro	Gly	Thr	Ser	Pro	Pro	His	Leu	Ser	Thr	Cys	Gly	Leu	Gly
		100						105					110		
Thr	Gly	Glu	Glu	Ser	Arg	Gln	Ser	Gln	Ala	Asn	Ala	Pro	Val	Tyr	Gln
		115					120						125		
Gln	Asn	Val	Leu	His	Thr	Gly	Lys	Arg	Trp	Phe	Ile	Ile	Cys	Pro	Val
	130					135						140			
Pro	Glu	Pro	Pro	Ala	Pro	Glu	Gly	Pro							
145					150										

&lt;210&gt; 3217

&lt;211&gt; 2570

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3217

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120  
acccatacca ggcactatga gctttacagg cgctgcaaac tggaggaaat gggctttaca  
180  
gatgtgggcc cagaaaacaa gccagtcagt gttcaagaga cctatgaagc caaaagacat  
240  
gagttccatg gtgaacgtca gaggaaggaa gaagaaatga aacagatggt tgtgcagcga  
300  
gtaaaggaga aagaagccat attgaaagaa gctgagagag agctacaggc caaatttgag  
360  
caccttaaga gacttcacca agaagagaga atgaagcttg aagaacaaag aagacttttg  
420  
gaagaagaaa taattgcttt ctctaaaaag aaagctacct ccgagatatt tcacagccag  
480  
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720  
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1140  
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1200  
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1320  
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1560  
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1620



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 1860  
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 1920  
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 1980  
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 2460  
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&lt;210&gt; 3218

&lt;211&gt; 181

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3218

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Glu	Asn	His	Cys	Asp	Phe	Val	Lys	Leu	Arg	Glu	Met	Leu	Ile	Cys	Thr
			20					25					30		
Asn	Met	Glu	Asp	Leu	Arg	Glu	Gln	Thr	His	Thr	Arg	His	Tyr	Glu	Leu
		35				40					45				
Tyr	Arg	Arg	Cys	Lys	Leu	Glu	Glu	Met	Gly	Phe	Thr	Asp	Val	Gly	Pro
	50					55					60				
Glu	Asn	Lys	Pro	Val	Ser	Val	Gln	Glu	Thr	Tyr	Glu	Ala	Lys	Arg	His
65				70					75					80	
Glu	Phe	His	Gly	Glu	Arg	Gln	Arg	Lys	Glu	Glu	Glu	Met	Lys	Gln	Met
			85					90						95	
Phe	Val	Gln	Arg	Val	Lys	Glu	Lys	Glu	Ala	Ile	Leu	Lys	Glu	Ala	Glu
		100						105					110		
Arg	Glu	Leu	Gln	Ala	Lys	Phe	Glu	His	Leu	Lys	Arg	Leu	His	Gln	Glu

	115		120		125	
Glu	Arg	Met	Lys	Leu	Glu	Glu
	130		135		140	
Ile	Ala	Phe	Ser	Lys	Lys	Lys
145			150		155	160
Ser	Phe	Leu	Ala	Thr	Gly	Ser
	165		170		175	
Asn	Ser	Asn	Phe	Leu		
	180					

&lt;210&gt; 3219

&lt;211&gt; 1241

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3219

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 gagegggaga cagacatcct ggacgatgaa ttgccaaacc aggatgggtca cagtgcgggc  
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<210> 3220

<211> 413

<212> PRT

<213> Homo sapiens

<400> 3220

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Leu	Gly	Cys	Ala	Ser	Ser	Gly	Arg	His	Val	Val	Pro	Ala	Gln	Val	His
			20				25						30		
Val	Asn	Gly	Gly	Xaa	Val	Thr	Ser	Glu	Arg	Glu	Thr	Asp	Ile	Leu	Asp
	35						40					45			
Asp	Glu	Leu	Pro	Asn	Gln	Asp	Gly	His	Ser	Ala	Gly	Ser	Met	Gly	Thr
	50					55					60				
Leu	Ser	Ser	Leu	Asp	Gly	Val	Thr	Asn	Ile	Ser	Glu	Gly	Gly	Tyr	Pro
65					70					75					80
Glu	Ala	Leu	Ser	Pro	Leu	Thr	Asn	Gly	Leu	Asp	Lys	Ser	Tyr	Pro	Met
				85					90					95	
Glu	Pro	Met	Val	Asn	Gly	Gly	Gly	Tyr	Pro	Tyr	Glu	Ser	Ala	Ser	Arg
			100					105						110	
Ala	Gly	Pro	Ala	His	Ala	Gly	His	Thr	Ala	Pro	Met	Arg	Pro	Ser	Tyr
	115						120						125		
Ser	Ala	Gln	Glu	Gly	Leu	Ala	Gly	Tyr	Gln	Arg	Glu	Gly	Pro	His	Pro
	130					135					140				
Ala	Trp	Pro	Gln	Pro	Val	Thr	Thr	Ser	His	Tyr	Ala	His	Asp	Pro	Ser
145					150					155					160
Gly	Met	Phe	Arg	Ser	Gln	Ser	Phe	Ser	Glu	Ala	Glu	Pro	Gln	Leu	Pro
				165					170					175	
Pro	Ala	Pro	Val	Arg	Gly	Gly	Ser	Ser	Arg	Glu	Ala	Val	Gln	Arg	Gly
			180					185						190	
Leu	Asn	Ser	Trp	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Pro	Arg	Pro
	195						200						205		
Pro	Pro	Arg	Gln	Gln	Glu	Arg	Ala	His	Leu	Glu	Ser	Leu	Val	Ala	Ser
	210					215								220	
Arg	Pro	Ser	Pro	Gln	Pro	Leu	Ala	Glu	Thr	Pro	Ile	Pro	Ser	Leu	Pro
225					230					235					240
Glu	Phe	Pro	Arg	Ala	Ala	Ser	Gln	Gln	Glu	Ile	Glu	Gln	Ser	Ile	Glu
				245					250					255	
Thr	Leu	Asn	Met	Leu	Met	Leu	Asp	Leu	Glu	Pro	Ala	Ser	Ala	Ala	Ala
			260					265					270		
Pro	Leu	His	Lys	Ser	Gln	Ser	Val	Pro	Gly	Ala	Trp	Pro	Gly	Ala	Ser
	275						280						285		
Pro	Leu	Ser	Ser	Gln	Pro	Leu	Ser	Gly	Ser	Ser	Arg	Gln	Ser	His	Pro
	290					295					300				
Leu	Thr	Gln	Ser	Arg	Ser	Gly	Tyr	Ile	Pro	Ser	Gly	His	Ser	Leu	Gly
305					310					315					320
Thr	Pro	Glu	Pro	Ala	Pro	Arg	Ala	Ser	Leu	Glu	Ser	Val	Pro	Pro	Gly
				325					330					335	
Arg	Ser	Tyr	Ser	Pro	Tyr	Asp	Tyr	Gln	Pro	Cys	Leu	Ala	Gly	Pro	Asn

	340		345		350										
Gln	Asp	Phe	His	Ser	Lys	Ser	Pro	Ala	Ser	Ser	Ser	Leu	Pro	Ala	Phe
	355						360					365			
Leu	Pro	Thr	Thr	His	Ser	Pro	Pro	Gly	Pro	Gln	Gln	Pro	Pro	Ala	Ser
	370					375						380			
Leu	Pro	Gly	Leu	Thr	Ala	Gln	Pro	Leu	Leu	Ser	Pro	Lys	Glu	Ala	Thr
385					390					395				400	
Ser	Asp	Pro	Ser	Arg	Thr	Pro	Glu	Glu	Glu	Pro	Leu	Asn			
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&lt;210&gt; 3221

&lt;211&gt; 1585

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3221

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 1585

&lt;210&gt; 3222

&lt;211&gt; 331

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3222

Leu	Leu	Ala	Val	Leu	Arg	Pro	Arg	Arg	Ser	Arg	Lys	Arg	His	Val	Gln
1				5					10					15	
Trp	Val	Glu	Glu	Pro	Gln	Arg	Ser	Cys	Thr	Ala	Arg	Arg	Trp	His	Ile
			20					25					30		
Gln	Ala	Thr	Gly	Gly	Val	Glu	Pro	Ala	Gly	Trp	Lys	Glu	Met	Arg	Cys
		35					40					45			
His	Leu	Arg	Ala	Asn	Gly	Tyr	Leu	Cys	Lys	Tyr	Gln	Phe	Glu	Val	Leu
	50					55					60				
Cys	Pro	Ala	Pro	Arg	Pro	Gly	Ala	Ala	Ser	Asn	Leu	Ser	Tyr	Arg	Ala
65					70					75					80
Pro	Phe	Gln	Leu	His	Ser	Ala	Ala	Leu	Asp	Phe	Ser	Pro	Pro	Gly	Thr
				85					90					95	
Glu	Val	Ser	Ala	Leu	Cys	Arg	Gly	Gln	Leu	Pro	Ile	Ser	Val	Thr	Cys
			100					105					110		
Ile	Ala	Asp	Glu	Ile	Gly	Ala	Arg	Trp	Asp	Lys	Leu	Ser	Gly	Asp	Val
		115					120						125		
Leu	Cys	Pro	Cys	Pro	Gly	Arg	Tyr	Leu	Arg	Ala	Gly	Lys	Cys	Ala	Glu
		130				135						140			
Leu	Pro	Asn	Cys	Leu	Asp	Asp	Leu	Gly	Gly	Phe	Ala	Cys	Glu	Cys	Ala
145					150					155					160
Thr	Gly	Phe	Glu	Leu	Gly	Lys	Asp	Gly	Arg	Ser	Cys	Val	Thr	Ser	Gly
				165					170					175	
Glu	Gly	Gln	Pro	Thr	Leu	Gly	Gly	Thr	Gly	Val	Pro	Thr	Arg	Arg	Pro
			180					185					190		
Pro	Ala	Thr	Ala	Thr	Ser	Pro	Val	Pro	Gln	Arg	Thr	Trp	Pro	Ile	Arg
		195					200					205			
Val	Asp	Glu	Lys	Leu	Gly	Glu	Thr	Pro	Leu	Val	Pro	Glu	Gln	Asp	Asn
	210					215						220			
Ser	Val	Thr	Ser	Ile	Pro	Glu	Ile	Pro	Arg	Trp	Gly	Ser	Gln	Ser	Thr
225					230					235					240
Met	Ser	Thr	Leu	Gln	Met	Ser	Leu	Gln	Ala	Glu	Ser	Lys	Ala	Thr	Ile

				245					250					255					
Thr	Pro	Ser	Gly	Ser	Val	Ile	Ser	Lys	Phe	Asn	Ser	Thr	Thr	Ser	Ser				
			260					265					270						
Ala	Thr	Pro	Gln	Ala	Phe	Asp	Ser	Ser	Ser	Ala	Val	Val	Phe	Ile	Phe				
		275					280					285							
Val	Ser	Thr	Ala	Val	Val	Val	Leu	Val	Ile	Leu	Thr	Met	Thr	Val	Leu				
	290					295				300									
Gly	Leu	Val	Lys	Leu	Cys	Phe	His	Glu	Ser	Pro	Ser	Ser	Gln	Pro	Arg				
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Lys	Glu	Ser	Met	Gly	Pro	Pro	Gly	Cys	Asp	Glu									
			325						330										

&lt;210&gt; 3223

&lt;211&gt; 985

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3223

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985

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&lt;210&gt; 3224

<211> 224  
 <212> PRT  
 <213> Homo sapiens

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 Val Ile Gly Val Ile Leu Gly Ala Glu Ala Ser Arg Arg Tyr Lys Lys  
 35 40 45  
 Val Ile Pro Gly Ala Glu Pro Leu Ile Cys Ala Ser Ser Leu Leu Ala  
 50 55 60  
 Thr Ala Pro Cys Leu Tyr Leu Ala Leu Val Leu Ala Pro Thr Thr Leu  
 65 70 75 80  
 Leu Ala Ser Tyr Val Phe Leu Gly Leu Gly Glu Leu Leu Leu Ser Cys  
 85 90 95  
 Asn Trp Ala Val Val Ala Asp Ile Leu Leu Ser Val Val Val Pro Arg  
 100 105 110  
 Cys Arg Gly Thr Ala Glu Ala Leu Gln Ile Thr Val Gly His Ile Leu  
 115 120 125  
 Gly Asp Ala Gly Ser Pro Tyr Leu Thr Gly Leu Ile Ser Ser Val Leu  
 130 135 140  
 Arg Pro Gly Ala Leu Thr Pro Leu Gln Arg Phe Arg Ser Leu Gln Gln  
 145 150 155 160  
 Ser Phe Leu Cys Cys Ala Phe Val Ile Ala Leu Gly Gly Gly Cys Phe  
 165 170 175  
 Leu Leu Thr Ala Leu Tyr Leu Glu Arg Asp Glu Thr Arg Ala Trp Gln  
 180 185 190  
 Pro Val Thr Gly Thr Pro Asp Ser Asn Asp Val Asp Ser Asn Asp Leu  
 195 200 205  
 Glu Arg Gln Gly Leu Leu Ser Gly Ala Gly Ala Ser Thr Glu Glu Pro  
 210 215 220

<210> 3225  
 <211> 506  
 <212> DNA  
 <213> Homo sapiens

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 180  
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 240  
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 300  
 aagtggaacc acagcctcaa cccacacaga ggatggaacc accttctgca gctaaaaata  
 360  
 accacaccgc ctttgaggtg agccacccaa gatgcaggtg gggctgtatg aaactccacg  
 420



aacatgggat gagtttcatt ttcagggttc cgaggggcca tgagtggtag caagatccct  
480

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506

<210> 3226

<211> 137

<212> PRT

<213> Homo sapiens

<400> 3226

Met	Lys	Val	Ile	Phe	Pro	Lys	Leu	Lys	Gln	Arg	Asn	Ile	Leu	Asn	Gly
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Leu	Arg	Pro	Cys	Thr	Phe	Phe	Ile	Gln	Glu	Ala	Thr	Lys	Asn	Ser	Ala
			20					25					30		
Cys	Phe	Pro	Val	Pro	Lys	Met	Pro	Val	Pro	Cys	Ala	Leu	Gly	Glu	Glu
		35				40					45				
Leu	Val	Pro	Cys	His	Arg	Gly	Thr	Gly	Pro	Ala	Val	Val	Trp	Pro	Ala
	50					55					60				
Gln	Pro	Gln	Gln	Gly	Glu	Val	Glu	Pro	Gln	Pro	Gln	Pro	Thr	Gln	Arg
65				70					75					80	
Met	Glu	Pro	Pro	Ser	Ala	Ala	Lys	Asn	Asn	His	Thr	Ala	Phe	Glu	Val
				85					90					95	
Ser	His	Pro	Arg	Cys	Arg	Trp	Gly	Cys	Met	Lys	Leu	His	Glu	His	Gly
			100					105					110		
Met	Ser	Phe	Ile	Phe	Arg	Val	Pro	Arg	Gly	His	Glu	Trp	Tyr	Gln	Asp
		115				120						125			
Pro	Trp	Arg	Cys	Pro	Trp	Phe	Pro	Met							
	130					135									

<210> 3227

<211> 1623

<212> DNA

<213> Homo sapiens

<400> 3227

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120  
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240  
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420  
ggcagcgtgg gcagcaaccg ggtccgcact accctcactc tctgcgtgga ggccatcgac  
480  
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540

gtcaagatgg gggcttacca caccatcgag ctggagccca accgccagtt caccctggcc  
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 660  
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 840  
 cagegccaca tacactttga tgttgtaaag tgcacctcgg tggccagccc aggatttgtg  
 900  
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 1140  
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 1620  
 aaa  
 1623

&lt;210&gt; 3228

&lt;211&gt; 385

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3228

Met	Lys	Leu	Val	Arg	Lys	Asn	Ile	Glu	Lys	Asp	Asn	Ala	Gly	Gln	Val
1				5					10					15	
Thr	Leu	Val	Pro	Glu	Glu	Pro	Glu	Asp	Met	Trp	His	Thr	Tyr	Asn	Leu
			20					25					30		
Val	Gln	Val	Gly	Asp	Ser	Leu	Arg	Ala	Ser	Thr	Ile	Arg	Lys	Val	Gln
		35					40					45			
Thr	Glu	Ser	Ser	Thr	Gly	Ser	Val	Gly	Ser	Asn	Arg	Val	Arg	Thr	Thr
	50					55				60					
Leu	Thr	Leu	Cys	Val	Glu	Ala	Ile	Asp	Phe	Asp	Ser	Gln	Ala	Cys	Gln

65                                      70                                      75                                      80  
 Leu Arg Val Lys Gly Thr Asn Ile Gln Glu Asn Glu Tyr Val Lys Met  
    85                                      90                                      95  
 Gly Ala Tyr His Thr Ile Glu Leu Glu Pro Asn Arg Gln Phe Thr Leu  
    100                                      105                                      110  
 Ala Lys Lys Gln Trp Asp Ser Val Val Leu Glu Arg Ile Glu Gln Ala  
    115                                      120                                      125  
 Cys Asp Pro Ala Trp Ser Ala Asp Val Ala Ala Val Val Met Gln Glu  
    130                                      135                                      140  
 Gly Leu Ala His Ile Cys Leu Val Thr Pro Ser Met Thr Leu Thr Arg  
 145                                      150                                      155                                      160  
 Ala Lys Val Glu Val Asn Ile Pro Arg Lys Arg Lys Gly Asn Cys Ser  
    165                                      170                                      175  
 Gln His Asp Arg Ala Leu Glu Arg Phe Tyr Glu Gln Val Val Gln Ala  
    180                                      185                                      190  
 Ile Gln Arg His Ile His Phe Asp Val Val Lys Cys Ile Leu Val Ala  
    195                                      200                                      205  
 Ser Pro Gly Phe Val Arg Glu Gln Phe Cys Asp Tyr Met Phe Gln Gln  
    210                                      215                                      220  
 Ala Val Lys Thr Asp Asn Lys Leu Leu Leu Glu Asn Arg Ser Lys Phe  
 225                                      230                                      235                                      240  
 Leu Gln Val His Ala Ser Ser Gly His Lys Tyr Ser Leu Lys Glu Ala  
    245                                      250                                      255  
 Leu Cys Asp Pro Thr Val Ala Ser Arg Leu Ser Asp Thr Lys Ala Ala  
    260                                      265                                      270  
 Gly Glu Val Lys Ala Leu Asp Asp Phe Tyr Lys Met Leu Gln His Glu  
    275                                      280                                      285  
 Pro Asp Arg Ala Phe Tyr Gly Leu Lys Gln Val Glu Lys Ala Asn Glu  
    290                                      295                                      300  
 Ala Met Ala Ile Asp Thr Leu Leu Ile Ser Asp Glu Leu Phe Arg His  
 305                                      310                                      315                                      320  
 Gln Asp Val Ala Thr Arg Ser Arg Tyr Val Arg Leu Val Asp Ser Val  
    325                                      330                                      335  
 Lys Glu Asn Ala Gly Thr Val Arg Ile Phe Ser Ser Leu His Val Ser  
    340                                      345                                      350  
 Gly Glu Gln Leu Ser Gln Leu Thr Gly Val Ala Ala Ile Leu Arg Phe  
    355                                      360                                      365  
 Pro Val Pro Glu Leu Ser Asp Gln Glu Gly Asp Ser Ser Ser Glu Glu  
    370                                      375                                      380  
 Asp  
 385

&lt;210&gt; 3229

&lt;211&gt; 1008

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3229

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 120  
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 180

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 1008

&lt;210&gt; 3230

&lt;211&gt; 232

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3230

Met	Glu	Asp	Gly	Lys	Arg	Glu	Arg	Trp	Pro	Thr	Leu	Met	Glu	Arg	Leu
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Cys	Ser	Asp	Gly	Phe	Ala	Phe	Pro	Gln	Tyr	Pro	Ile	Lys	Pro	Tyr	His
			20					25					30		
Leu	Lys	Arg	Ile	His	Arg	Ala	Val	Leu	Arg	Gly	Asn	Leu	Glu	Glu	Leu
			35				40					45			
Lys	Tyr	Leu	Leu	Leu	Thr	Tyr	Tyr	Asp	Ile	Asn	Lys	Arg	Asp	Arg	Lys
	50					55					60				
Glu	Arg	Thr	Ala	Leu	His	Leu	Ala	Cys	Ala	Thr	Gly	Gln	Pro	Glu	Met
65					70					75				80	
Val	His	Leu	Leu	Val	Ser	Arg	Arg	Cys	Glu	Leu	Asn	Leu	Cys	Asp	Arg
				85					90					95	
Glu	Asp	Arg	Thr	Pro	Leu	Ile	Lys	Ala	Val	Gln	Leu	Arg	Gln	Glu	Ala
			100					105					110		
Cys	Ala	Thr	Leu	Leu	Leu	Gln	Asn	Gly	Ala	Asp	Pro	Asn	Ile	Thr	Asp
			115				120					125			
Val	Phe	Gly	Arg	Thr	Ala	Leu	His	Tyr	Ala	Val	Tyr	Asn	Glu	Asp	Thr
	130					135				140					
Ser	Met	Ile	Glu	Lys	Leu	Leu	Ser	His	Gly	Thr	Asn	Ile	Glu	Glu	Cys

145		150		155		160									
Ser	Lys	Asn	Glu	Tyr	Gln	Pro	Leu	Leu	Leu	Ala	Val	Ser	Arg	Arg	Lys
		165						170					175		
Val	Lys	Met	Val	Glu	Phe	Leu	Leu	Lys	Lys	Lys	Ala	Asn	Val	Asn	Ala
		180						185					190		
Ile	Asp	Tyr	Leu	Gly	Arg	Ser	Ala	Leu	Ile	Leu	Ala	Val	Thr	Leu	Gly
	195					200						205			
Glu	Lys	Asp	Ile	Val	Ile	Leu	Leu	Leu	Gln	His	Asn	Ile	Asp	Val	Phe
	210					215					220				
Ser	Arg	Asp	Val	Tyr	Gly	Lys	Leu								
225					230										

&lt;210&gt; 3231

&lt;211&gt; 1367

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3231

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1080

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&lt;210&gt; 3232

&lt;211&gt; 251

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3232

Met	Ser	Asp	Ile	Gly	Asp	Trp	Phe	Arg	Ser	Ile	Pro	Ala	Ile	Thr	Arg
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Tyr	Trp	Phe	Ala	Ala	Thr	Val	Ala	Val	Pro	Leu	Val	Gly	Lys	Leu	Gly
			20					25					30		
Leu	Ile	Ser	Pro	Ala	Tyr	Leu	Phe	Leu	Trp	Pro	Glu	Ala	Phe	Leu	Tyr
		35					40					45			
Arg	Phe	Gln	Ile	Trp	Arg	Pro	Ile	Thr	Ala	Thr	Phe	Tyr	Phe	Pro	Val
	50				55					60					
Gly	Pro	Gly	Thr	Gly	Phe	Leu	Tyr	Leu	Val	Asn	Leu	Tyr	Phe	Leu	Tyr
65				70					75					80	
Gln	Tyr	Ser	Thr	Arg	Leu	Glu	Thr	Gly	Ala	Phe	Asp	Gly	Arg	Pro	Ala
			85					90					95		
Asp	Tyr	Leu	Phe	Met	Leu	Leu	Phe	Asn	Trp	Ile	Cys	Ile	Val	Ile	Thr
		100					105					110			
Gly	Leu	Ala	Met	Asp	Met	Gln	Leu	Leu	Met	Ile	Pro	Leu	Ile	Met	Ser
	115					120						125			
Val	Leu	Tyr	Val	Trp	Ala	Gln	Leu	Asn	Arg	Asp	Met	Ile	Val	Ser	Phe
	130				135					140					
Trp	Phe	Gly	Thr	Arg	Phe	Lys	Ala	Cys	Tyr	Leu	Pro	Trp	Val	Ile	Leu
145				150					155					160	
Gly	Phe	Asn	Tyr	Ile	Ile	Gly	Gly	Ser	Val	Ile	Asn	Glu	Leu	Ile	Gly
		165						170					175		
Asn	Leu	Val	Gly	His	Leu	Tyr	Phe	Phe	Leu	Met	Phe	Arg	Tyr	Pro	Met
		180					185					190			
Asp	Leu	Gly	Gly	Arg	Asn	Phe	Leu	Ser	Thr	Pro	Gln	Phe	Leu	Tyr	Arg
	195					200						205			
Trp	Leu	Pro	Ser	Arg	Arg	Gly	Gly	Val	Ser	Gly	Phe	Gly	Val	Pro	Pro
	210				215					220					
Ala	Ser	Met	Arg	Arg	Ala	Ala	Asp	Gln	Asn	Gly	Gly	Gly	Gly	Arg	His
225				230					235					240	
Asn	Trp	Gly	Gln	Gly	Phe	Arg	Leu	Gly	Asp	Gln					
		245						250							

&lt;210&gt; 3233

&lt;211&gt; 975

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3233

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 60  
 accgttggtt accttgtggc tttccatctg ttctttgtta tgtttgtatg gtcctattgg  
 120  
 atgacaattt tcacatctcc cgcttcccc tccaaagagt tctacttgtc caattctgaa  
 180  
 aaggaacgtt atgaaaaaga attcagccaa gaaagacaac aagaaatttt gagaagagca  
 240  
 gcaagagctt tacctatcta taccacatca gcttcaaaaa ctatcagata ttgtgaaaaa  
 300  
 tgtcagctga ttaaacctga tcgggcgcat cactgctcag cctgtgactc atgtattctt  
 360  
 aagatggatc atccctgtcc ttgggtgaat aactgtgtgg gatttttctaa ttacaaattc  
 420  
 ttctgtctgt ttttattgta ttccctatta tattgccttt tcgtggccgc acagttttag  
 480  
 agtacttaaa aaatttttga cgaaagaacc gacaaaaacc cgggccaaaa ttccacgtac  
 540  
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 660  
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 720  
 gctgtctggc tagccccctcc acaagtcggt cactctgcac aaggaatccg agagctcatc  
 780  
 aaggatcagc acggtctggg gccaggtgg ggtggaacac gcacggtcca caagcaattc  
 840  
 tgtctttctc aaggcttttt cttgtgcagt atgaaatcct tcatatttca tatgaagtat  
 900  
 gtgccttctg gggcactgag ctcaggaact ccaaaaagac cccttcgggc cggatcccgg  
 960  
 cttcaaggct gcccc  
 975

&lt;210&gt; 3234

&lt;211&gt; 159

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3234

Xaa	Ala	Tyr	Val	Val	Glu	Leu	Cys	Val	Phe	Thr	Ile	Phe	Gly	Asn	Glu
1				5					10					15	
Glu	Asn	Gly	Lys	Thr	Val	Val	Tyr	Leu	Val	Ala	Phe	His	Leu	Phe	Phe
		20						25					30		
Val	Met	Phe	Val	Trp	Ser	Tyr	Trp	Met	Thr	Ile	Phe	Thr	Ser	Pro	Ala
	35						40				45				
Ser	Pro	Ser	Lys	Glu	Phe	Tyr	Leu	Ser	Asn	Ser	Glu	Lys	Glu	Arg	Tyr
	50					55					60				
Glu	Lys	Glu	Phe	Ser	Gln	Glu	Arg	Gln	Gln	Glu	Ile	Leu	Arg	Arg	Ala
65				70					75				80		
Ala	Arg	Ala	Leu	Pro	Ile	Tyr	Thr	Thr	Ser	Ala	Ser	Lys	Thr	Ile	Arg



				85					90					95					
Tyr	Cys	Glu	Lys	Cys	Gln	Leu	Ile	Lys	Pro	Asp	Arg	Ala	His	His	Cys				
				100					105					110					
Ser	Ala	Cys	Asp	Ser	Cys	Ile	Leu	Lys	Met	Asp	His	Pro	Cys	Pro	Trp				
				115				120					125						
Val	Asn	Asn	Cys	Val	Gly	Phe	Ser	Asn	Tyr	Lys	Phe	Phe	Leu	Leu	Phe				
				130				135					140						
Leu	Leu	Tyr	Ser	Leu	Leu	Tyr	Cys	Leu	Phe	Val	Ala	Ala	Gln	Phe					
145						150							155						

&lt;210&gt; 3235

&lt;211&gt; 551

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3235

```

ntggaaactg agcttcaaac atataagcat tctcgtcagg ggctagatga aatgtacaat
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gaagccagaa ggcagcttcg agatgaatct cagttacgac aggatgtaga gaatgagcta
120
gcagtacaag ttagtatgaa gcatgagatt gaacttgcca tgaagttgct ggagaaagat
180
atccatgaga aacaagatac tctgataggc cttcgacaac aactagagga agttaagca
240
attaacatag agatgtatca aaagttgcag gggttctgaag atggcttgaa agaaaaaat
300
gaaataattg cccgactaga agaaaaaacc aataaaatta ctgcagccat gaggcagctg
360
gaacaaagat tgcagcaagc agagaaggcg caaatggaag ctgaagatga ggatgagaaa
420
tatctacaag aatgtctcag taaatctgat agtctgcaga aacaaatctc ccaaaggag
480
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540
caggaagatc t
551

```

&lt;210&gt; 3236

&lt;211&gt; 183

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3236

Xaa	Glu	Thr	Glu	Leu	Gln	Thr	Tyr	Lys	His	Ser	Arg	Gln	Gly	Leu	Asp				
1				5					10					15					
Glu	Met	Tyr	Asn	Glu	Ala	Arg	Arg	Gln	Leu	Arg	Asp	Glu	Ser	Gln	Leu				
			20					25				30							
Arg	Gln	Asp	Val	Glu	Asn	Glu	Leu	Ala	Val	Gln	Val	Ser	Met	Lys	His				
			35				40					45							
Glu	Ile	Glu	Leu	Ala	Met	Lys	Leu	Leu	Glu	Lys	Asp	Ile	His	Glu	Lys				
			50			55					60								
Gln	Asp	Thr	Leu	Ile	Gly	Leu	Arg	Gln	Gln	Leu	Glu	Glu	Val	Lys	Ala				
65				70						75				80					
Ile	Asn	Ile	Glu	Met	Tyr	Gln	Lys	Leu	Gln	Gly	Ser	Glu	Asp	Gly	Leu				

	85		90		95										
Lys	Glu	Lys	Asn	Glu	Ile	Ile	Ala	Arg	Leu	Glu	Glu	Lys	Thr	Asn	Lys
		100					105						110		
Ile	Thr	Ala	Ala	Met	Arg	Gln	Leu	Glu	Gln	Arg	Leu	Gln	Gln	Ala	Glu
		115					120						125		
Lys	Ala	Gln	Met	Glu	Ala	Glu	Asp	Glu	Asp	Glu	Lys	Tyr	Leu	Gln	Glu
	130					135					140				
Cys	Leu	Ser	Lys	Ser	Asp	Ser	Leu	Gln	Lys	Gln	Ile	Ser	Gln	Lys	Glu
145					150				155					160	
Lys	Gln	Leu	Val	Gln	Leu	Glu	Thr	Asp	Leu	Lys	Ile	Glu	Lys	Glu	Trp
			165					170						175	
Arg	Gln	Thr	Leu	Gln	Glu	Asp									
		180													

&lt;210&gt; 3237

&lt;211&gt; 1323

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3237

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cgggcgctgt ggaccatggc tccgcccgcg gcgcctggcc gggaccgtgt gggccgtgag  
120

gatgaggacc gttgggaagt acggggggac cgcaaggccc ggaagcccct ggtggagaag  
180

aagcgacgcg cgcggatcaa cgagagtctt caggagtgc ggcgtgctgt ggcggggcgcc  
240

gaggtgcagg ccaagctgga gaacgccgaa gtgctggagc tgacgggtgcg gcgggtccag  
300

ggtgtgctgc ggggccgggc gcgcgagcgc gagcagctgc aggcggaagc gagcgagcgc  
360

ttcgtgccg gctacatcca gtgcatgcac gaggtgcaca cgttcgtgtc cacgtgccag  
420

gccatcgacg ctaccgtcgc tgccgagctc ctgaaccatc tgctcgagtc catgccgctg  
480

cgtgagggca gcagcttcca ggatctgctg ggggacgccc tggcgggggc acctagagcc  
540

cctggacgga gtggctggcc tgcggggggc gctccgggat cccaataacc cagccccccg  
600

ggtcctgggg acgacctgtg ctccgacctg gaggaggccc ctgaggctga actgagtcag  
660

gctcctgctg aggggcccga cttggtgccc gcagccctgg gcagcctgac cacagcccaa  
720

attgcccgga gtgtctggag gccttggtga ccaatgccag ccagagtcct gcgggggtgg  
780

gcccgccct ccctggatct cctccctcct ccagggggtt cagatgtggt ggggtagggc  
840

cctggaagtc tcccaggtct tccctccctc ctctgatgga tggcttgagc ggcagccct  
900

ggtaaccagc ccagtcaggc ccagccccg tttcttaaga aacttttagg gaccctgcag  
960

ctctggagtg ggtggaggga gggagctacg ggcaggagga agaattttgt agagctgcca  
1020

gcgctctccc aggttcaccc acccaggcctt caccagccct gtgcgggctc tgggggcaga  
 1080  
 ggtggcagaa atggtgctgg gcactagtgt tccaggcagc cctgggctaa acaaaagctt  
 1140  
 gaacttgcca cttcagcggg gagatgagag gcagggtgcac tcagctgcac tgcccagagc  
 1200  
 tgtgatgctc tgtacatctt gttttagca cacttgagtt tgtgtattcc attgacatca  
 1260  
 aatgtgacaa ttttactaaa taaagaattt tggagttagt tacccttgaa aaaaaagtcg  
 1320  
 acg  
 1323

<210> 3238  
 <211> 249  
 <212> PRT  
 <213> Homo sapiens

<400> 3238  
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 20 25 30  
 Gly Arg Asp Arg Val Gly Arg Glu Asp Glu Asp Arg Trp Glu Val Arg  
 35 40 45  
 Gly Asp Arg Lys Ala Arg Lys Pro Leu Val Glu Lys Lys Arg Arg Ala  
 50 55 60  
 Arg Ile Asn Glu Ser Leu Gln Glu Leu Arg Leu Leu Ala Gly Ala  
 65 70 75 80  
 Glu Val Gln Ala Lys Leu Glu Asn Ala Glu Val Leu Glu Leu Thr Val  
 85 90 95  
 Arg Arg Val Gln Gly Val Leu Arg Gly Arg Ala Arg Glu Arg Glu Gln  
 100 105 110  
 Leu Gln Ala Glu Ala Ser Glu Arg Phe Ala Ala Gly Tyr Ile Gln Cys  
 115 120 125  
 Met His Glu Val His Thr Phe Val Ser Thr Cys Gln Ala Ile Asp Ala  
 130 135 140  
 Thr Val Ala Ala Glu Leu Leu Asn His Leu Leu Glu Ser Met Pro Leu  
 145 150 155 160  
 Arg Glu Gly Ser Ser Phe Gln Asp Leu Leu Gly Asp Ala Leu Ala Gly  
 165 170 175  
 Pro Pro Arg Ala Pro Gly Arg Ser Gly Trp Pro Ala Gly Gly Ala Pro  
 180 185 190  
 Gly Ser Pro Ile Pro Ser Pro Pro Gly Pro Gly Asp Asp Leu Cys Ser  
 195 200 205  
 Asp Leu Glu Glu Ala Pro Glu Ala Glu Leu Ser Gln Ala Pro Ala Glu  
 210 215 220  
 Gly Pro Asp Leu Val Pro Ala Ala Leu Gly Ser Leu Thr Thr Ala Gln  
 225 230 235 240  
 Ile Ala Arg Ser Val Trp Arg Pro Trp  
 245

<210> 3239  
 <211> 432

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3239

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 60  
 agaaacttgg tgagaaataa gctggcagtg attacgcgtc tccttcagaa tctgatcatg  
 120  
 ggtttggtcc tccttttctt cgttctgcgg gtccgaagca atgtgctaaa ggggtgctatc  
 180  
 caggaccgcg taggtctcct ttaccagttt gtgggcgcca ccccgtagac aggcattgctg  
 240  
 aacgctgtga atctgtttcc cgtgctgcga gctgtcagcg accaggagag tcaggacggc  
 300  
 ctctaccaga agtggcagat gatgctggcc tatgcactgc acgtcctccc cttcagcgtt  
 360  
 gttgccacca tgattttcag cagtgtgtgc tactggacgc tgggcttaca tcctgaggtt  
 420  
 gcccgattgg gt  
 432

&lt;210&gt; 3240

&lt;211&gt; 144

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3240

Lys	Thr	Lys	Asp	Ser	Pro	Gly	Val	Phe	Ser	Lys	Leu	Gly	Val	Leu	Leu
1				5					10					15	
Arg	Arg	Val	Thr	Arg	Asn	Leu	Val	Arg	Asn	Lys	Leu	Ala	Val	Ile	Thr
			20					25					30		
Arg	Leu	Leu	Gln	Asn	Leu	Ile	Met	Gly	Leu	Phe	Leu	Leu	Phe	Phe	Val
	35					40					45				
Leu	Arg	Val	Arg	Ser	Asn	Val	Leu	Lys	Gly	Ala	Ile	Gln	Asp	Arg	Val
	50				55					60					
Gly	Leu	Leu	Tyr	Gln	Phe	Val	Gly	Ala	Thr	Pro	Tyr	Thr	Gly	Met	Leu
65				70					75					80	
Asn	Ala	Val	Asn	Leu	Phe	Pro	Val	Leu	Arg	Ala	Val	Ser	Asp	Gln	Glu
			85					90					95		
Ser	Gln	Asp	Gly	Leu	Tyr	Gln	Lys	Trp	Gln	Met	Met	Leu	Ala	Tyr	Ala
		100					105					110			
Leu	His	Val	Leu	Pro	Phe	Ser	Val	Val	Ala	Thr	Met	Ile	Phe	Ser	Ser
	115					120					125				
Val	Cys	Tyr	Trp	Thr	Leu	Gly	Leu	His	Pro	Glu	Val	Ala	Arg	Leu	Gly
	130					135					140				

&lt;210&gt; 3241

&lt;211&gt; 492

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3241

gtggaatttt tttagacaaa gtctcaaaaa acaacaaaac aaacaaaagg taagataaat  
 60

acgaaataca aaataagagg caggaagagc ccaaagcatc agaaatgtgc cagttataat  
 120  
 gggccaaaat cccctcttgt gtctccagaa gtatttgaaa aatacgttag gatctgcctc  
 180  
 acagacatgc tcccaggaca ctcgacagca aggaggtacg gcgggcccag ccagccaagg  
 240  
 cagaggagga catcactgcc acagcagggg gcctgactgg cagcaaaagg gacgactccg  
 300  
 gcgaaaagtc agcaggaaac aggacagggg ctggaccaat ggcctccctc agccccacac  
 360  
 cccacccagg caggagcggg gcctggcccg gggcaggcgg gtgggagagc tcaactgagt  
 420  
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 480  
 tgggaacca gg  
 492

<210> 3242  
 <211> 107  
 <212> PRT  
 <213> Homo sapiens

<400> 3242  
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 Leu Gly Ser Ala Ser Gln Thr Cys Ser Gln Asp Thr Arg Gln Gln Gly  
 20 25 30  
 Gly Thr Ala Gly Pro Ala Ser Gln Gly Arg Gly Gly His His Cys His  
 35 40 45  
 Ser Arg Gly Pro Asp Trp Gln Gln Lys Gly Arg Leu Arg Arg Lys Val  
 50 55 60  
 Ser Arg Lys Gln Asp Arg Gly Trp Thr Asn Gly Leu Pro Gln Pro His  
 65 70 75 80  
 Thr Pro Pro Arg Gln Glu Arg Cys Leu Ala Arg Gly Arg Arg Val Gly  
 85 90 95  
 Glu Leu Thr Glu Trp Ala Ala Gly His Gly Pro  
 100 105

<210> 3243  
 <211> 944  
 <212> DNA  
 <213> Homo sapiens

<400> 3243  
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 120  
 tttgaggcaa aggtaacca gaatctccca atgaaagaag gctgcacaga ggtctctctc  
 180  
 ctctcagttg ggtggtctgt tgatttttcc cgtccacagc ttggtgaaga tgaattctct  
 240  
 tacggtttcg atggacgagg actcaaggca gaaaatggac aatttgagga atttggccag  
 300

acttttgggg agaatgatgt tattggctgc tttgctaatt ttgagactga agaagtagaa  
 360  
 ctttccttct ccaagaatgg agaagaccta ggtgtggcat tctggatcag caaggattcc  
 420  
 ctggcagacc gggcccttct accccatgtc ctctgcaaaa attgtgttgt agaattaaac  
 480  
 ttcggtcaga aggaggagcc cttcttccca ccaccagaag agtttgtgtt cattcatgct  
 540  
 gtgcctgttg aggagcgtgt acgcactgca gtccctccca agaccataga ggaatgtgag  
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 gtgattctga tgggtgggact acccggtatct ggaaagaccc agtgggcact gaaatatgca  
 660  
 aaagaaaacc ctgagaaaag atacaatgtc ctgggagctg agactgtgct caatcaaag  
 720  
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 780  
 caagcctccc agtgccttag taagctggtc cagattgctt cccggacaaa gaggaacttt  
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 900  
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 944

&lt;210&gt; 3244

&lt;211&gt; 314

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3244

Asp	Leu	His	Phe	Gln	Val	Ser	Lys	Asp	Arg	Tyr	Gly	Gly	Gln	Pro	Leu
1				5					10					15	
Phe	Ser	Glu	Lys	Phe	Pro	Thr	Leu	Trp	Ser	Gly	Ala	Arg	Ser	Thr	Tyr
			20					25					30		
Gly	Val	Thr	Lys	Gly	Lys	Val	Cys	Phe	Glu	Ala	Lys	Val	Thr	Gln	Asn
		35					40					45			
Leu	Pro	Met	Lys	Glu	Gly	Cys	Thr	Glu	Val	Ser	Leu	Leu	Arg	Val	Gly
	50					55					60				
Trp	Ser	Val	Asp	Phe	Ser	Arg	Pro	Gln	Leu	Gly	Glu	Asp	Glu	Phe	Ser
65					70					75				80	
Tyr	Gly	Phe	Asp	Gly	Arg	Gly	Leu	Lys	Ala	Glu	Asn	Gly	Gln	Phe	Glu
			85						90					95	
Glu	Phe	Gly	Gln	Thr	Phe	Gly	Glu	Asn	Asp	Val	Ile	Gly	Cys	Phe	Ala
			100					105					110		
Asn	Phe	Glu	Thr	Glu	Glu	Val	Glu	Leu	Ser	Phe	Ser	Lys	Asn	Gly	Glu
		115					120					125			
Asp	Leu	Gly	Val	Ala	Phe	Trp	Ile	Ser	Lys	Asp	Ser	Leu	Ala	Asp	Arg
		130				135					140				
Ala	Leu	Leu	Pro	His	Val	Leu	Cys	Lys	Asn	Cys	Val	Val	Glu	Leu	Asn
145				150					155					160	
Phe	Gly	Gln	Lys	Glu	Glu	Pro	Phe	Phe	Pro	Pro	Pro	Glu	Glu	Phe	Val
			165						170					175	
Phe	Ile	His	Ala	Val	Pro	Val	Glu	Glu	Arg	Val	Arg	Thr	Ala	Val	Pro
			180					185					190		
Pro	Lys	Thr	Ile	Glu	Glu	Cys	Glu	Val	Ile	Leu	Met	Val	Gly	Leu	Pro

	195		200		205										
Gly	Ser	Gly	Lys	Thr	Gln	Trp	Ala	Leu	Lys	Tyr	Ala	Lys	Glu	Asn	Pro
	210					215					220				
Glu	Lys	Arg	Tyr	Asn	Val	Leu	Gly	Ala	Glu	Thr	Val	Leu	Asn	Gln	Met
225					230					235				240	
Arg	Met	Lys	Gly	Leu	Glu	Glu	Pro	Glu	Met	Asp	Pro	Lys	Ser	Arg	Asp
				245					250				255		
Leu	Leu	Val	Gln	Gln	Ala	Ser	Gln	Cys	Leu	Ser	Lys	Leu	Val	Gln	Ile
		260					265					270			
Ala	Ser	Arg	Thr	Lys	Arg	Asn	Phe	Ile	Leu	Asp	Gln	Cys	Asn	Val	Tyr
	275					280					285				
Asn	Ser	Gly	Gln	Arg	Arg	Lys	Leu	Leu	Leu	Phe	Lys	Thr	Phe	Ser	Arg
290						295					300				
Lys	Val	Val	Val	Val	Val	Pro	Asn	Glu	Glu						
305					310										

&lt;210&gt; 3245

&lt;211&gt; 980

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3245

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 ctcagctgga tgaggatggg gatttggacg tggtgagaag accacgagcc gcctctgatt  
 120  
 ccaaccacgc agggcctctg agagacaagg tacatcccat gattctagca caggaagaag  
 180  
 acgacgtcct gggagaggaa gcacaaggca gcccgcacga tatcatcaga ataggtgtgg  
 240  
 cggggcgccc tgctcctggc agactacatc ctgttccgac aggacctctt ccgaggatgt  
 300  
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 360  
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 gccctcaaca gccacctggc tgccactgga ggtggtatag ttaggggtcaa agaactggac  
 480  
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 540  
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 600  
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 660  
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 720  
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&lt;213&gt; Homo sapiens

&lt;400&gt; 3249

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2452



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 Ser Leu Leu Gly Cys Ser Ser Ser Gln Arg Ala Ala Ser Leu Asp Ser  
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&lt;210&gt; 3251

&lt;211&gt; 2595

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3251

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&lt;213&gt; Homo sapiens

&lt;400&gt; 3254

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1				5					10					15	
Tyr	Gln	Ser	Ser	His	Met	Val	Asp	Tyr	Gln	Pro	Tyr	Arg	Lys	His	Lys
		20						25					30		
Tyr	Ser	Arg	Val	Thr	Pro	Gln	Glu	Gln	Ala	Lys	Leu	Asp	Ala	Gln	Leu
		35					40					45			
Arg	Asp	Lys	Glu	Phe	Tyr	Arg	Pro	Ile	Pro	Asn	Pro	Asn	Pro	Lys	Leu
	50					55				60					
Thr	Asp	Gly	Tyr	Pro	Ala	Phe	Lys	Arg	Pro	His	Met	Thr	Ala	Lys	Asp
65					70					75				80	
Leu	Gly	Leu	Pro	Gly	Phe	Phe	Pro	Ser	Gln	Glu	His	Glu	Ala	Thr	Arg
			85						90					95	
Glu	Asp	Glu	Arg	Lys	Phe	Thr	Ser	Thr	Cys	His	Phe	Thr	Tyr	Pro	Ala
		100						105					110		
Ser	His	Asp	Leu	His	Leu	Ala	Gln	Gly	Asp	Pro	Asn	Gln	Val	Leu	Gln
		115					120					125			
Ser	Ala	Asp	Phe	Pro	Cys	Leu	Val	Asp	Pro	Lys	His	Gln	Pro	Ala	Ala
	130					135						140			
Glu	Met	Ala	Lys	Gly	Tyr	Leu	Leu	Leu	Pro	Gly	Cys	Pro	Cys	Leu	His
145					150					155				160	
Cys	His	Ile	Val	Lys	Val	Pro	Ile	Leu	Asn	Arg	Trp	Gly	Pro	Leu	Met
			165					170						175	
Pro	Phe	Tyr	Gln												
			180												

&lt;210&gt; 3255

&lt;211&gt; 724

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3255

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 gcgagaggag aggacggcga tcgtagggga cacctgagag tcagaggccc gagggggctg  
 120  
 ggactcatgt cgaggtcggg gaaggatgta aaacccggac ggacatcact gtaggccgca  
 180  
 cctgctgaga ggccagagct gcctccttga gagtgaagtt gtttacagac aagagaagag  
 240  
 atcttggcgg acacatcaca gctagccgcg aatcccgaag ggtcagcaga gcctagaaag  
 300  
 gaatatgagg ggggtcggaa tgaggcaggc gaaaggcacg gacgtgggag ggcacggcta  
 360  
 cccaacgggg acacctacga agggagctac gaattcggta aaagacatgg ccaggggatc  
 420  
 tacaaattta aaaatgggtgc tcgatatatc ggagaatatg ttagaaataa aaagcacggt  
 480  
 caaggcactt ttatatatcc agatggatcc agatatgaag gagagtgggc aaatgacctg  
 540  
 cggcacggcc atggcgtata ctactacatc aataatgaca cctacactgg agagtggttt  
 600  
 gctcatcaaa ggcacgggca aggcacctat ttatacgag agacgggcag taagtatgtt  
 660  
 ggcacctggg tgaacggaca gcaggagggc acggccgagc tcattcacct gaaccacagg  
 720  
 tacc  
 724

&lt;210&gt; 3256

&lt;211&gt; 169

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3256

Ser	Cys	Leu	Gln	Thr	Arg	Glu	Glu	Ile	Leu	Ala	Asp	Thr	Ser	Gln	Leu
1				5					10					15	
Ala	Ala	Asn	Pro	Glu	Gly	Ser	Ala	Glu	Pro	Arg	Lys	Glu	Tyr	Glu	Gly
			20					25					30		
Gly	Arg	Asn	Glu	Ala	Gly	Glu	Arg	His	Gly	Arg	Gly	Arg	Ala	Arg	Leu
		35					40					45			
Pro	Asn	Gly	Asp	Thr	Tyr	Glu	Gly	Ser	Tyr	Glu	Phe	Gly	Lys	Arg	His
		50				55					60				
Gly	Gln	Gly	Ile	Tyr	Lys	Phe	Lys	Asn	Gly	Ala	Arg	Tyr	Ile	Gly	Glu
65					70					75				80	
Tyr	Val	Arg	Asn	Lys	Lys	His	Gly	Gln	Gly	Thr	Phe	Ile	Tyr	Pro	Asp
			85						90					95	
Gly	Ser	Arg	Tyr	Glu	Gly	Glu	Trp	Ala	Asn	Asp	Leu	Arg	His	Gly	His
			100					105					110		
Gly	Val	Tyr	Tyr	Tyr	Ile	Asn	Asn	Asp	Thr	Tyr	Thr	Gly	Glu	Trp	Phe
		115					120					125			
Ala	His	Gln	Arg	His	Gly	Gln	Gly	Thr	Tyr	Leu	Tyr	Ala	Glu	Thr	Gly
		130				135					140				
Ser	Lys	Tyr	Val	Gly	Thr	Trp	Val	Asn	Gly	Gln	Gln	Glu	Gly	Thr	Ala
145					150					155					160
Glu	Leu	Ile	His	Leu	Asn	His	Arg	Tyr							

165

<210> 3257  
 <211> 368  
 <212> DNA  
 <213> Homo sapiens

<400> 3257  
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 120  
 agtgaagaca tcagccagac ctccaagtac agtcccatct actcgccaga cccctactat  
 180  
 gcttcggagt ctgagtactg gacctaccat gggccccca aagtgccccg agccagaagg  
 240  
 ttctcgtctg gaggagagga ggatgatttt gaccgcagca tgcacaagct ccaaagtgga  
 300  
 attggccggc tgattctgaa ggaagaaatg aaggcccggt cgagctccta tgcagatccc  
 360  
 tggcgcgc  
 368

<210> 3258  
 <211> 122  
 <212> PRT  
 <213> Homo sapiens

<400> 3258  
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 1 5 10 15  
 Pro Thr Phe Ser Arg Ser Pro His His Tyr Tyr Arg Ser Gly Asp Leu  
 20 25 30  
 Ser Thr Ala Thr Lys Ser Glu Thr Ser Glu Asp Ile Ser Gln Thr Ser  
 35 40 45  
 Lys Tyr Ser Pro Ile Tyr Ser Pro Asp Pro Tyr Tyr Ala Ser Glu Ser  
 50 55 60  
 Glu Tyr Trp Thr Tyr His Gly Ser Pro Lys Val Pro Arg Ala Arg Arg  
 65 70 75 80  
 Phe Ser Ser Gly Gly Glu Glu Asp Asp Phe Asp Arg Ser Met His Lys  
 85 90 95  
 Leu Gln Ser Gly Ile Gly Arg Leu Ile Leu Lys Glu Glu Met Lys Ala  
 100 105 110  
 Arg Ser Ser Ser Tyr Ala Asp Pro Trp Arg  
 115 120

<210> 3259  
 <211> 747  
 <212> DNA  
 <213> Homo sapiens

<400> 3259  
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 60

gtgctcagcc ttcgtacagc tctgggccgg cctgcagccc atcttggtgtg gcaacaaccg  
 120  
 caccattgaa cccggagcgc tgcggcgggg caacatgagc tccctgggct ttacgagcaa  
 180  
 ggagcagcgg aacctgggcc ttctcgtgca cctcatgacc agcaacccca aaatcctgta  
 240  
 cgcgcctgcg ggctctgagg tcgaccgcgt catcctcaag gccaacgaga cttttgcttt  
 300  
 tgtgggcaac gtgactcact atgcccaggt ctggctcaac atctcggcgg agatccgcag  
 360  
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 420  
 gctgcggctg caccctgagg cactgaacct gtcactggat gagctgccgc cggccctgag  
 480  
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 540  
 caacgcggcc tgcggctgga tccagttcat gtccaagggt agcgtggaca tcttcaaggg  
 600  
 cttccctgac gaggagagca ttgtcaacta caccctcaac caggcctacc aggacaacgt  
 660  
 cactgttttt gccagtgtga tcttccagac ccggaaggac ggctcgtccc gcctcacgtg  
 720  
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 747

<210> 3260

<211> 197

<212> PRT

<213> Homo sapiens

<400> 3260

Met	Ser	Ser	Leu	Gly	Phe	Thr	Ser	Lys	Glu	Gln	Arg	Asn	Leu	Gly	Leu
1				5					10					15	
Leu	Val	His	Leu	Met	Thr	Ser	Asn	Pro	Lys	Ile	Leu	Tyr	Ala	Pro	Ala
			20					25					30		
Gly	Ser	Glu	Val	Asp	Arg	Val	Ile	Leu	Lys	Ala	Asn	Glu	Thr	Phe	Ala
		35					40					45			
Phe	Val	Gly	Asn	Val	Thr	His	Tyr	Ala	Gln	Val	Trp	Leu	Asn	Ile	Ser
	50				55						60				
Ala	Glu	Ile	Arg	Ser	Phe	Leu	Glu	Gln	Gly	Arg	Leu	Gln	Gln	His	Leu
65					70				75					80	
Arg	Trp	Leu	Gln	Gln	Tyr	Val	Ala	Glu	Leu	Arg	Leu	His	Pro	Glu	Ala
			85					90					95		
Leu	Asn	Leu	Ser	Leu	Asp	Glu	Leu	Pro	Pro	Ala	Leu	Arg	Gln	Asp	Asn
		100						105					110		
Phe	Ser	Leu	Pro	Ser	Gly	Met	Ala	Leu	Leu	Gln	Gln	Leu	Asp	Thr	Ile
	115					120						125			
Asp	Asn	Ala	Ala	Cys	Gly	Trp	Ile	Gln	Phe	Met	Ser	Lys	Val	Ser	Val
	130				135						140				
Asp	Ile	Phe	Lys	Gly	Phe	Pro	Asp	Glu	Glu	Ser	Ile	Val	Asn	Tyr	Thr
145				150					155					160	
Leu	Asn	Gln	Ala	Tyr	Gln	Asp	Asn	Val	Thr	Val	Phe	Ala	Ser	Val	Ile
		165						170					175		
Phe	Gln	Thr	Arg	Lys	Asp	Gly	Ser	Ser	Arg	Leu	Thr	Cys	Thr	Thr	Arg



180  
Ser Ala Arg Thr Pro  
195

185

190

<210> 3261  
<211> 1323  
<212> DNA  
<213> Homo sapiens

&lt;400&gt; 3261

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120  
tgctgtgcca attgtgtttt tttgctctgt gtacattttg gttttatttg gggttgctgt  
180  
tgatgatttc ctttgttccg gtgttctgtc tcccctcgct ggctgtgtgg gggctgcctg  
240  
gcccgctgct tgccgcctcc atagatcccc gttgcgcagc catctgtcat ggacgacatt  
300  
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360  
gagtttgata aattccttga agaaagagcc aaagctgctg aaatgggtcc cgacctcccc  
420  
tcgcccccca tggaggctcc tgccccagcc tcaaaccctt ctggccggaa gaagccagag  
480  
cggtcagagg atgccctctt cgccctgtga gcagctctgt ggtttgctc cccagatggc  
540  
gggtccccgc ttgcaccccg tggacaccgg gcaactggcca ctctacatc cccagctcca  
600  
cacggcctgc acacctgtgt ttccatggaa atgccaccgt gtctgctccc aggcctccca  
660  
ctagtcagga ccagcttcag ccacttcttt tctctgagtg gtgggacaac tgcagccaga  
720  
gactctctcc cctcccacca tgggcccctc tgcccatggt tcctcccagg aagagcgggc  
780  
agagtggccc agccccaggc agtgcttctt gagcagacca cccggactgt ctttcctcca  
840  
cccgcccatg gagaaagagc acgcccggcc ccgcctgtg ctcacctctg cctggctcag  
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960  
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1020  
ccttgtgaca tttggcttac cagcatttga gaaggctctg ctgggtctcc atggtggggg  
1080  
tctctcacct tcttgacct ctctccatca ttcagctgcc agcccaggct tcacacccaa  
1140  
gctggctcag cagccgagcc tggcaccgag ggtccctgca ggctccctgg gcagggagag  
1200  
ggccaaggac aattgggagg gcagcaggca gcccgagat ggtggccatg tggcacgctg  
1260  
ctgagacgac actaccaata aaccaaactg ccacgcacaa aaaaaaaaaa aaaaaaaaaa  
1320

aaa  
1323

<210> 3262  
<211> 81  
<212> PRT  
<213> Homo sapiens

<400> 3262  
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Arg Thr Asp Leu Lys Gly Asp Asp Leu Glu Glu Gly Val Thr Ser Glu  
20 25 30  
Glu Phe Asp Lys Phe Leu Glu Glu Arg Ala Lys Ala Ala Glu Met Val  
35 40 45  
Pro Asp Leu Pro Ser Pro Pro Met Glu Ala Pro Ala Pro Ala Ser Asn  
50 55 60  
Pro Ser Gly Arg Lys Lys Pro Glu Arg Ser Glu Asp Ala Leu Phe Ala  
65 70 75 80  
Leu

<210> 3263  
<211> 1128  
<212> DNA  
<213> Homo sapiens

<400> 3263  
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120  
gagctggaga gagaggccaa gaaatcagcg aagaagccgc agtcctcaag cacagagccc  
180  
gccaggaaac ctggccagaa ggagaagaga gtgcggcccc aggagaagca acaagccaag  
240  
cccgtgaagg tggagcggac ccggaagcgg tccgagggct tctcgatgga caggaaggta  
300  
gagaagaaga aagagccctc cgtggaggag aagctgcaga agctgcacag tgagatcaag  
360  
tttgccctaa aggtcgacag cccggacgtg aaggggtgcc tgaatgccct agaggagctg  
420  
ggaaccctgc aggtgacctc tcagatcctc cagaagaaca cagacgtggt ggccaccttg  
480  
aagaagattc gccgttaca agcgaacaag gacgtaatgg agaaggcagc agaagtctat  
540  
accgggtca agtcgcgggt cctcggccca aagatcgagg cggcgcagaa agtgaacaag  
600  
gctgggatgg agaaggagaa ggccgaggag aagctggccg gggaggagct ggccggggag  
660  
gaggcccccc aggagaaggc ggaggacaag cccagcaccg atctctcagc cccagtgaat  
720  
ggcgaggcca catcacagaa gggggagagc gcagaggaca aggagcacga ggagggtcgg  
780

gactcggagg aggggccaag gtgtggctcc tctgaagacc tgcacgacag cgtacgggag  
 840  
 ggtcccgacc tggacaggcc tgggagcgac cggcaggagc gcgagagggc acggggggac  
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 960  
 ctcaggctgc ccctctcctt ccccggctcg caggagagca gagcagagaa ctgtggggaa  
 1020  
 cgctgtgctg tttgtatttg ttcccttggg ttttttttct ctgcctaatt tctgtgattt  
 1080  
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<210> 3264

<211> 308

<212> PRT

<213> Homo sapiens

<400> 3264

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Pro	Val	Lys	Lys	Arg	Gly	Arg	Lys	Gly	Arg	Gly	Arg	Gly	Pro	Pro	Ser
			20					25					30		
Ser	Ser	Asp	Ser	Glu	Pro	Glu	Ala	Glu	Leu	Glu	Arg	Glu	Ala	Lys	Lys
		35					40					45			
Ser	Ala	Lys	Lys	Pro	Gln	Ser	Ser	Ser	Thr	Glu	Pro	Ala	Arg	Lys	Pro
	50					55				60					
Gly	Gln	Lys	Glu	Lys	Arg	Val	Arg	Pro	Glu	Glu	Lys	Gln	Gln	Ala	Lys
65					70					75				80	
Pro	Val	Lys	Val	Glu	Arg	Thr	Arg	Lys	Arg	Ser	Glu	Gly	Phe	Ser	Met
				85					90					95	
Asp	Arg	Lys	Val	Glu	Lys	Lys	Lys	Glu	Pro	Ser	Val	Glu	Glu	Lys	Leu
			100					105					110		
Gln	Lys	Leu	His	Ser	Glu	Ile	Lys	Phe	Ala	Leu	Lys	Val	Asp	Ser	Pro
		115					120					125			
Asp	Val	Lys	Gly	Cys	Leu	Asn	Ala	Leu	Glu	Glu	Leu	Gly	Thr	Leu	Gln
	130					135						140			
Val	Thr	Ser	Gln	Ile	Leu	Gln	Lys	Asn	Thr	Asp	Val	Val	Ala	Thr	Leu
145					150					155				160	
Lys	Lys	Ile	Arg	Arg	Tyr	Lys	Ala	Asn	Lys	Asp	Val	Met	Glu	Lys	Ala
			165					170					175		
Ala	Glu	Val	Tyr	Thr	Arg	Leu	Lys	Ser	Arg	Val	Leu	Gly	Pro	Lys	Ile
		180						185					190		
Glu	Ala	Val	Gln	Lys	Val	Asn	Lys	Ala	Gly	Met	Glu	Lys	Glu	Lys	Ala
	195					200					205				
Glu	Glu	Lys	Leu	Ala	Gly	Glu	Glu	Leu	Ala	Gly	Glu	Glu	Ala	Pro	Gln
	210				215						220				
Glu	Lys	Ala	Glu	Asp	Lys	Pro	Ser	Thr	Asp	Leu	Ser	Ala	Pro	Val	Asn
225					230					235				240	
Gly	Glu	Ala	Thr	Ser	Gln	Lys	Gly	Glu	Ser	Ala	Glu	Asp	Lys	Glu	His
			245					250					255		
Glu	Glu	Gly	Arg	Asp	Ser	Glu	Glu	Gly	Pro	Arg	Cys	Gly	Ser	Ser	Glu
	260					265					270				
Asp	Leu	His	Asp	Ser	Val	Arg	Glu	Gly	Pro	Asp	Leu	Asp	Arg	Pro	Gly

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<210> 3265
<211> 524
<212> DNA
<213> Homo sapiens
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<210> 3266  
<211> 82  
<212> PRT  
<213> Homo sapiens

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<210> 3267
<211> 393
<212> DNA
<213> Homo sapiens
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&lt;400&gt; 3267

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120  
cattgtggga agtttcaaga tgccttggag ccattgctca gctgggtggc agataccgag  
180  
gagctcatag ccaatcagaa acctccatct gctgagtata aagtggtgaa agcacagatc  
240  
caagaacaga agttgctcca gcggtccta gatgatcgaa aggccacagt agacatgctt  
300  
caagcagaag gaggcagaat agcccagtca gcagagctgg ctgatagaga gaaaatcact  
360  
ggacagctgg agagtcttga aagtagatgg act  
393

&lt;210&gt; 3268

&lt;211&gt; 131

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3268

Val	Glu	Tyr	Ala	Cys	Arg	Val	Gln	Gly	Leu	Glu	His	Asp	Met	Glu	Glu
1				5				10						15	
Ile	Asn	Ala	Arg	Trp	Asn	Thr	Leu	Asn	Lys	Lys	Val	Ala	Gln	Arg	Ile
		20					25						30		
Ala	Gln	Leu	Gln	Glu	Ala	Leu	Leu	His	Cys	Gly	Lys	Phe	Gln	Asp	Ala
		35					40					45			
Leu	Glu	Pro	Leu	Leu	Ser	Trp	Leu	Ala	Asp	Thr	Glu	Glu	Leu	Ile	Ala
	50					55				60					
Asn	Gln	Lys	Pro	Pro	Ser	Ala	Glu	Tyr	Lys	Val	Val	Lys	Ala	Gln	Ile
65					70				75					80	
Gln	Glu	Gln	Lys	Leu	Leu	Gln	Arg	Leu	Leu	Asp	Asp	Arg	Lys	Ala	Thr
			85					90					95		
Val	Asp	Met	Leu	Gln	Ala	Glu	Gly	Gly	Arg	Ile	Ala	Gln	Ser	Ala	Glu
			100					105				110			
Leu	Ala	Asp	Arg	Glu	Lys	Ile	Thr	Gly	Gln	Leu	Glu	Ser	Leu	Glu	Ser
		115					120					125			
Arg	Trp	Thr													
		130													

&lt;210&gt; 3269

&lt;211&gt; 1423

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3269

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120  
aaatatagga tgtggaagcg aaaaaatata tgggtagcaa gtgaggtgta ctcaaaaata  
180

agcaaaagtc acgtgggtct gattttatac cctcgttgga aagcttggtc tcagacacac  
240  
tggtactgca agtgtgtgtg agggggaaac tctcacacac tttgcagttg aggacagggc  
300  
tagactttga ggtggaccct ggctcccagg gctgtgtact cccagcccgt gtttctcttt  
360  
tgctcagact gaacaagtgg aacgaaatta cattaaagaa aagaaggcag cagtgaagaa  
420  
atgtgaagac aagaagggtg agctgaaaga gaacctgatt gctgagctag aagaaaagaa  
480  
gaaaatgatt gaaaacgaaa tgctgacaat ggaactgaat ggagattcta tggaggtgaa  
540  
acctatcatg accagaaagt tgcggaggcg accaaatgat cccgtcccca tcccagacaa  
600  
gaggaggaaa cctgctccag cccagctaaa ctatttgta acagatgaac agatcatgga  
660  
ggatctgaga acattaaata agcttaagtc acccaagaga ccagcatctc catcctctcc  
720  
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780  
agatggcaaa ctgtattatg acaaaagatg gtaccacaag agccaggcca tctatctgga  
840  
gtcaaaggac aaccagaaac tgagctgcgt gatcagttct gtaggagcca atgagatctg  
900  
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960  
gctcttcgtg atccgccggc gctcagctgc ttgactttct acagtgcctc tctcttgacc  
1020  
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1080  
taacttactg ggaatagcta ctcagccttg gaaatggaga gcactgcagt gaattcttta  
1140  
gggcactttt gtggccggat gcttccaact ttgtcagctc tttctgcctc aacttcttcc  
1200  
agacatcagt caccatgaga ctgttttact ttcaggcgta ttgggggggtt tgatttactt  
1260  
tccttttatt tctttatttt ttgcttatac ttgtttttga aaacctcctc tgagtttgaa  
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gggacagcta tttttattga ttatctttaa gtctctctac catggagaag agcaggaagg  
1380  
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1423

&lt;210&gt; 3270

&lt;211&gt; 169

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3270

Met	Ile	Glu	Asn	Glu	Met	Leu	Thr	Met	Glu	Leu	Asn	Gly	Asp	Ser	Met
1				5					10					15	
Glu	Val	Lys	Pro	Ile	Met	Thr	Arg	Lys	Leu	Arg	Arg	Arg	Pro	Asn	Asp
			20					25					30		
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<210> 3271
<211> 464
<212> DNA
<213> Homo sapiens
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<210> 3272
<211> 140
<212> PRT
<213> Homo sapiens
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2466



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65		70		75		80									
Ile	Ser	Cys	Ile	Ala	Tyr	Leu	Leu	Val	Thr	Arg	Asn	Trp	Arg	Gly	Gln
		85		90		95									
Ser	His	Arg	Leu	Pro	Ala	Pro	Arg	Gly	Gln	Gly	Ser	Leu	Ser	Ile	Leu
		100		105		110									
Cys	Ser	Ala	Val	Ser	Pro	Val	Pro	Ser	Val	Thr	Pro	Ser	Thr	Trp	Met
		115		120		125									
Ala	Thr	Thr	Glu	Lys	Pro	Glu	Leu	Gly	Pro	Ala	His				
130		135		140											

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 <211> 387  
 <212> DNA  
 <213> Homo sapiens

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 aagtgcagaa ggcctgaaat aaccaactgg gtccgtctca cccgtgaaat aaaacacaag  
 180  
 aatattgtaa cttttcatga atggtatgaa acaagcaacc acctctggct agtgggtggaa  
 240  
 ctccgcacag gtggttcctt aaaaacagtt attgctcaag atgaaaacct cccagaagat  
 300  
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<210> 3274  
 <211> 129  
 <212> PRT  
 <213> Homo sapiens

<400> 3274
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Gly Ser Lys Thr Val Val Tyr Lys Gly Arg Arg Lys Gly Thr Ile Asn
20 25 30
Phe Val Ala Ile Leu Cys Thr Asp Lys Cys Arg Arg Pro Glu Ile Thr
35 40 45
Asn Trp Val Arg Leu Thr Arg Glu Ile Lys His Lys Asn Ile Val Thr
50 55 60
Phe His Glu Trp Tyr Glu Thr Ser Asn His Leu Trp Leu Val Val Glu
65 70 75 80
Leu Arg Thr Gly Gly Ser Leu Lys Thr Val Ile Ala Gln Asp Glu Asn
85 90 95
Leu Pro Glu Asp Val Val Arg Glu Phe Gly Ile Asp Leu Ile Ser Gly
100 105 110
Leu His His Leu His Lys Leu Gly Ile Leu Phe Val Thr Phe Leu Leu

115 120 125  
Gly

<210> 3275  
<211> 1266  
<212> DNA  
<213> Homo sapiens

<400> 3275  
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120  
ttttctttta tagagacatg aataacagat acactgaagt ataaacaaaa attggcctga  
180  
agcgtccggt ggccggctta gtaggagct atggctaaac atcatcctga ttgatcttt  
240  
tgccgcaagc aggctggtgt tgccatcgga agactgtgtg aaaaatgtga tggcaagtgt  
300  
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360  
tatggatctt accaggggcg ctgtgtgatc tgtggaggac ctgggggtctc tgatgcctat  
420  
tattgtaagg agtgcaccat ccaggagaag gacagagatg gctgcccaaa gattgtcaat  
480  
ctggggagct ctaagacaga cctcttctat gaacgcaaaa aatacggctt caagaagagg  
540  
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600  
tgctactac taccagcaga aaggagcag agcccagagc atcaccagga gtgcctgcta  
660  
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720  
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780  
aatgggtttt cttgaattcg agaagcatag atctgttctc catattggta tgttctcct  
840  
caaccaagat cttctaaaaa gaaataatat tttagtcttc tgcttgagga actgactgtg  
900  
aagcgacgcc cagtgaaaaa catgatcttg cagcagctct ggtggcagct gtccttgagg  
960  
aacctttggt gtgtggtggg aagctatcag aacaagaaat gtaggcattt cccgtttttt  
1020  
ttgggggggg ggtggggggg cagggtctctg ccctcttgaa aggcatttac ttgtttaaca  
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1140  
agtctcatat tattttcctt ttgagaaatt ggaaactctt tctgttgcta ttatattaat  
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1266

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 <211> 110  
 <212> PRT  
 <213> Homo sapiens

<400> 3276  
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 Val Ala Ile Gly Arg Leu Cys Glu Lys Cys Asp Gly Lys Cys Val Ile  
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 Cys Asp Ser Tyr Val Arg Pro Cys Thr Leu Val Arg Ile Cys Asp Glu  
 35 40 45  
 Cys Asn Tyr Gly Ser Tyr Gln Gly Arg Cys Val Ile Cys Gly Gly Pro  
 50 55 60  
 Gly Val Ser Asp Ala Tyr Tyr Cys Lys Glu Cys Thr Ile Gln Glu Lys  
 65 70 75 80  
 Asp Arg Asp Gly Cys Pro Lys Ile Val Asn Leu Gly Ser Ser Lys Thr  
 85 90 95  
 Asp Leu Phe Tyr Glu Arg Lys Lys Tyr Gly Phe Lys Lys Arg  
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<210> 3277  
 <211> 1435  
 <212> DNA  
 <213> Homo sapiens

<400> 3277  
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 120  
 cagacttccg tctccttaa atgttcatgc gtaagtgcgt ggcagaagcg gctcaagcgc  
 180  
 actcgtgcgt cattgctgtc agggccgagg gagcgggtgca aggccgccgc gtgacgtcag  
 240  
 gacgccgcgg tcaggacgtc gaagccaaag aagaccagag ccagccgggt ggcacagcgg  
 300  
 tgtcgtggcc gtgttgctga tcgcctgggt ggttggtggc gtgtccctgc agcgaaggat  
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 gagaaggccc gtcaggccct ggccagcatc agcaagtcag gagctgccgg cggctctgcc  
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 aagtccagca gcaatgggccc tgtggccagt gcaagtacgt gtcccaggca gaagcctcag  
 660  
 ctttgcagca gcagcagtac taccagtgg accagcagta caactatgcc taccctaca  
 720  
 gctactacta tcccatgagc atgtaccaga gctatggctc cccttcccag tatgggatgg  
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ccggctccta tggctagcca caccacagca gccatccgca cccaacacc aagggactct  
 840  
 gaaccagccc ccagtccccg gcatggatga gagcatgtcc taccaggctc cccctcagca  
 900  
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 1080  
 cagctgtgga accgcatgaa acccgccctt gggactggag gttcaagttc aacatccaga  
 1140  
 agcgaccctt tgctgttacc acccagagct ttggctccaa cgcagagggc cagcacagt  
 1200  
 gttttggccc ccagcccaac cctgagaaag ttcagaacca cagcgggtcc tctgcccggg  
 1260  
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 1320  
 gcttcaccgc ctgtgagtcg gaggaggaca aggaccgcac ggaaaagctg ctcaaggagg  
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<210> 3278  
 <211> 104  
 <212> PRT  
 <213> Homo sapiens

<400> 3278  
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 Tyr Ser Met Val Ala Gly Ala Gly Arg Glu Asn Gly Met Glu Thr Pro  
 20 25 30  
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 35 40 45  
 Ile Ser Lys Ser Gly Ala Ala Gly Gly Ser Ala Lys Ser Ser Ser Asn  
 50 55 60  
 Gly Pro Val Ala Ser Ala Ser Thr Cys Pro Arg Gln Lys Pro Gln Leu  
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 Cys Ser Ser Ser Ser Thr Thr Ser Gly Thr Ser Ser Thr Thr Met Pro  
 85 90 95  
 Thr Pro Thr Ala Thr Thr Ile Pro  
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<210> 3279  
 <211> 1130  
 <212> DNA  
 <213> Homo sapiens

<400> 3279  
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 120

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 ggggtgcctg ggacccccag caccagagc ctaggcagcc ggaacttcat ccgcaacagc  
 240  
 aagaagatgc agagctggta cagtatgctg agccccactt ataagcagcg taatgaggac  
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 360  
 gccctgcagc gtgagatcct gctccagggc cgcctctacc tctctgagaa ctggatctgc  
 420  
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 720  
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 1130

&lt;210&gt; 3280

&lt;211&gt; 376

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3280

Xaa	Arg	Ala	His	Arg	Ala	Ala	Ser	Met	Phe	Asp	Thr	Thr	Pro	His	Ser
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Gly	Arg	Ser	Thr	Pro	Ser	Ser	Ser	Pro	Ser	Leu	Arg	Lys	Arg	Leu	Gln
			20					25					30		
Leu	Leu	Pro	Pro	Ser	Arg	Pro	Pro	Pro	Glu	Pro	Glu	Pro	Gly	Thr	Met
		35					40					45			
Val	Glu	Lys	Gly	Ser	Asp	Ser	Ser	Ser	Glu	Lys	Gly	Gly	Val	Pro	Gly
	50					55					60				
Thr	Pro	Ser	Thr	Gln	Ser	Leu	Gly	Ser	Arg	Asn	Phe	Ile	Arg	Asn	Ser
65				70					75					80	
Lys	Lys	Met	Gln	Ser	Trp	Tyr	Ser	Met	Leu	Ser	Pro	Thr	Tyr	Lys	Gln
			85						90					95	
Arg	Asn	Glu	Asp	Phe	Arg	Lys	Leu	Phe	Ser	Lys	Leu	Pro	Glu	Ala	Glu

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<210> 3281
<211> 842
<212> DNA
<213> Homo sapiens
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120
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240
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300
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360

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 480  
 ccacatgatg ttcctttcct cttgcaaaag aagttgctgg aaggcccact gtccagcagc  
 540  
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 600  
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 660  
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 720  
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 840  
 tc  
 842

<210> 3282  
 <211> 146  
 <212> PRT  
 <213> Homo sapiens

<400> 3282  
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 Pro Asp Thr Ser Leu Gln Val Leu Leu Val Ala Gly Pro Thr Lys Ala  
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 Pro Trp Pro Arg Gln Pro Gly Gly Cys Trp Thr Val Gly Leu Pro Ala  
 35 40 45  
 Thr Ser Phe Ala Arg Gly Lys Glu His His Val Gly His Ile His Glu  
 50 55 60  
 Gly Thr Gly Asn Ser Val Val Pro Ser Val Thr Pro Cys Gln Asp Thr  
 65 70 75 80  
 Gln Asp Glu Asn Pro Ala Pro Glu Arg Ala Ala Gly Ile Ser Ser Thr  
 85 90 95  
 His Thr Gln Ala Leu Cys Pro Gln Ala Pro Pro Ser Val Leu Pro Gly  
 100 105 110  
 Asn Asn Thr Leu Cys Glu Pro Val Val Glu Pro Gly Thr Ala Trp Ala  
 115 120 125  
 Ser Glu Gln Ser His Glu Ile Arg Val Arg Thr Pro Ser Cys Arg Gly  
 130 135 140  
 Arg Asp  
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<210> 3283  
 <211> 3268  
 <212> DNA  
 <213> Homo sapiens

<400> 3283  
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240  
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cggaagatcg atgagcagaa caaagagttc aagacacttt cagagcagtt gtccgtgacc  
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840  
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tccaattacc cctccatctc cacatctgag atcggagaca ctgaggatgc cctccagcag  
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1080  
gaacagcagg acagcaagaa agtccaggcg gaaccaccac agactgacat agatttggac  
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2760  
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2940  
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<210> 3284  
 <211> 1012  
 <212> PRT  
 <213> Homo sapiens

<400> 3284

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Ala	Arg	Gln	Ala	Tyr	Gln	Arg	Val	Arg	Arg	Ala	Ala	Val	Val	Ile	Gln
			20					25					30		
Ala	Phe	Thr	Arg	Xaa	His	Val	Cys	Ala	Glu	Asn	Leu	Pro	Pro	Val	Leu
		35					40					45			
Met	Glu	His	Lys	Ala	Thr	Thr	Ile	Gln	Lys	His	Val	Arg	Gly	Trp	Met
	50					55					60				
Ala	Arg	Arg	His	Phe	Gln	Arg	Leu	Arg	Asp	Ala	Ala	Ile	Val	Ile	Gln
65					70					75					80
Cys	Ala	Phe	Arg	Met	Leu	Lys	Ala	Arg	Arg	Glu	Leu	Lys	Ala	Leu	Arg
				85					90					95	
Ile	Glu	Ala	Arg	Ser	Ala	Glu	His	Leu	Lys	Arg	Leu	Asn	Val	Gly	Met
			100					105						110	
Glu	Asn	Lys	Val	Val	Gln	Leu	Gln	Arg	Lys	Ile	Asp	Glu	Gln	Asn	Lys
		115					120					125			
Glu	Phe	Lys	Thr	Leu	Ser	Glu	Gln	Leu	Ser	Val	Thr	Thr	Ser	Thr	Tyr
	130					135					140				
Thr	Met	Glu	Val	Glu	Arg	Leu	Lys	Lys	Glu	Leu	Val	His	Tyr	Gln	Gln
145					150					155					160
Ser	Pro	Gly	Glu	Asp	Thr	Ser	Leu	Arg	Leu	Gln	Glu	Glu	Val	Glu	Ser
				165					170					175	
Leu	Arg	Thr	Glu	Leu	Gln	Arg	Ala	His	Ser	Glu	Arg	Lys	Ile	Leu	Glu
		180						185					190		
Asp	Ala	His	Ser	Arg	Glu	Lys	Asp	Glu	Leu	Arg	Lys	Arg	Val	Ala	Asp
	195						200					205			
Leu	Glu	Gln	Glu	Asn	Ala	Leu	Leu	Lys	Asp	Glu	Lys	Glu	Gln	Leu	Asn
	210					215						220			
Asn	Gln	Ile	Leu	Cys	Gln	Ser	Lys	Asp	Glu	Phe	Ala	Gln	Asn	Ser	Val
225					230					235					240
Lys	Glu	Asn	Leu	Leu	Met	Lys	Lys	Glu	Leu	Glu	Glu	Glu	Arg	Ser	Arg
				245					250					255	
Tyr	Gln	Asn	Leu	Val	Lys	Glu	Tyr	Ser	Gln	Leu	Glu	Gln	Arg	Tyr	Asp
		260						265					270		
Asn	Leu	Arg	Asp	Glu	Met	Thr	Ile	Ile	Lys	Gln	Thr	Pro	Gly	His	Arg
	275						280					285			
Arg	Asn	Pro	Ser	Asn	Gln	Ser	Ser	Leu	Glu	Ser	Asp	Ser	Asn	Tyr	Pro
	290					295					300				
Ser	Ile	Ser	Thr	Ser	Glu	Ile	Gly	Asp	Thr	Glu	Asp	Ala	Leu	Gln	Gln
305					310					315					320
Val	Glu	Glu	Ile	Gly	Leu	Glu	Lys	Ala	Ala	Met	Asp	Met	Thr	Val	Phe
				325					330					335	
Leu	Lys	Leu	Gln	Lys	Arg	Val	Arg	Glu	Leu	Glu	Gln	Glu	Arg	Lys	Lys
		340						345					350		
Leu	Gln	Val	Gln	Leu	Glu	Lys	Arg	Glu	Gln	Gln	Asp	Ser	Lys	Lys	Val
	355						360					365			
Gln	Ala	Glu	Pro	Pro	Gln	Thr	Asp	Ile	Asp	Leu	Asp	Pro	Asn	Ala	Asp

370		375		380
Leu Ala Tyr Asn Ser	Leu Lys Arg Gln Glu	Leu Glu Ser Glu Asn Lys		
385	390	395	400	
Lys Leu Lys Asn Asp	Leu Asn Glu Leu Arg	Lys Ala Val Ala Asp Gln		
405	410	415		
Ala Thr Gln Asn Asn Ser	Ser His Gly Ser Pro Asp Ser Tyr Ser Leu			
420	425	430		
Leu Leu Asn Gln Leu Lys	Leu Ala His Glu Glu Leu Glu Val Arg Lys			
435	440	445		
Glu Glu Val Leu Ile Leu	Arg Thr Gln Ile Val Ser Ala Asp Gln Arg			
450	455	460		
Arg Leu Ala Gly Arg Asn	Ala Glu Pro Asn Ile Asn Ala Arg Ser Ser			
465	470	475	480	
Trp Pro Asn Ser Glu Arg	His Val Asp Gln Glu Asp Ala Ile Glu Ala			
485	490	495		
Tyr His Gly Val Cys Gln	Thr Asn Arg Leu Leu Glu Ala Gln Leu Gln			
500	505	510		
Ala Gln Ser Leu Glu His	Glu Glu Glu Val Glu His Leu Lys Ala Gln			
515	520	525		
Leu Glu Ala Leu Lys Glu	Glu Met Asp Lys Gln Gln Gln Thr Phe Cys			
530	535	540		
Gln Thr Leu Leu Leu Ser	Pro Glu Ala Gln Val Glu Phe Gly Val Gln			
545	550	555	560	
Gln Glu Ile Ser Arg Leu	Thr Asn Glu Asn Leu Asp Leu Lys Glu Leu			
565	570	575		
Val Glu Lys Leu Glu Lys	Asn Glu Arg Lys Leu Lys Lys Gln Leu Lys			
580	585	590		
Ile Tyr Met Lys Lys Ala	Gln Asp Leu Glu Ala Ala Gln Ala Leu Ala			
595	600	605		
Gln Ser Glu Arg Lys Arg	His Glu Leu Asn Arg Gln Val Thr Val Gln			
610	615	620		
Arg Lys Glu Lys Asp Phe	Gln Gly Met Leu Glu Tyr His Lys Glu Asp			
625	630	635	640	
Glu Ala Leu Leu Ile Arg	Asn Leu Val Thr Asp Leu Lys Pro Gln Met			
645	650	655		
Leu Ser Gly Thr Val Pro	Cys Leu Pro Ala Tyr Ile Leu Tyr Met Cys			
660	665	670		
Ile Arg His Ala Asp Tyr	Thr Asn Asp Asp Leu Lys Val His Ser Leu			
675	680	685		
Leu Thr Ser Thr Ile Asn	Gly Ile Lys Lys Val Leu Lys Lys His Asn			
690	695	700		
Asp Asp Phe Glu Met Thr	Ser Phe Trp Leu Ser Asn Thr Cys Arg Leu			
705	710	715	720	
Leu His Cys Leu Lys Gln	Tyr Ser Gly Asp Glu Gly Phe Met Thr Gln			
725	730	735		
Asn Thr Ala Lys Gln Asn	Glu His Cys Leu Lys Asn Phe Asp Leu Thr			
740	745	750		
Glu Tyr Arg Gln Val Leu	Ser Asp Leu Ser Ile Gln Ile Tyr Gln Gln			
755	760	765		
Leu Ile Lys Ile Ala Glu	Gly Val Leu Gln Pro Met Ile Val Ser Ala			
770	775	780		
Met Leu Glu Asn Glu Ser	Ile Gln Gly Leu Ser Gly Val Lys Pro Thr			
785	790	795	800	
Gly Tyr Arg Lys Arg Ser	Ser Ser Ser Met Ala Asp Gly Asp Asn Ser Tyr			

805 810 815  
 Cys Leu Glu Ala Ile Ile Arg Gln Met Asn Ala Phe His Thr Val Met  
 820 825 830  
 Cys Asp Gln Gly Leu Asp Pro Glu Ile Ile Leu Gln Val Phe Lys Gln  
 835 840 845  
 Leu Phe Tyr Met Ile Asn Ala Val Thr Leu Asn Asn Leu Leu Leu Arg  
 850 855 860  
 Lys Asp Val Cys Ser Trp Ser Thr Gly Met Gln Leu Arg Tyr Asn Ile  
 865 870 875 880  
 Ser Gln Leu Glu Glu Trp Leu Arg Gly Arg Asn Leu His Gln Ser Gly  
 885 890 895  
 Ala Val Gln Thr Met Glu Pro Leu Ile Gln Ala Ala Gln Leu Leu Gln  
 900 905 910  
 Leu Lys Lys Lys Thr Gln Glu Asp Ala Glu Ala Ile Cys Ser Leu Cys  
 915 920 925  
 Thr Ser Leu Ser Thr Gln Gln Ile Val Lys Ile Leu Asn Leu Tyr Thr  
 930 935 940  
 Pro Leu Asn Glu Phe Glu Glu Arg Val Thr Val Ala Phe Ile Arg Thr  
 945 950 955 960  
 Ile Gln Ala Gln Leu Gln Glu Arg Asn Asp Pro Gln Gln Leu Leu Leu  
 965 970 975  
 Asp Ala Lys His Met Phe Pro Val Leu Phe Pro Phe Asn Pro Ser Ser  
 980 985 990  
 Leu Thr Met Asp Ser Ile His Ile Pro Ala Cys Leu Asn Leu Glu Phe  
 995 1000 1005  
 Leu Asn Glu Val  
 1010

&lt;210&gt; 3285

&lt;211&gt; 1518

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3285

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 aacctgatga caccaccact ttattttgag ctaaattcctc atttaagtga gaacaggaca  
 120  
 ggtttcacca ctgcctcctt tggcaacttg agtggtggtg ttcccaccga gtttatggct  
 180  
 gcaaagatag gtctttttctc gtatttatgt ataaacaggt accagttttg attttattta  
 240  
 atcatttcat acattaacat acatgacaca tcaaaatgag aaatgcacag tttaaccgtt  
 300  
 caacagctgg ccttacttca aaagaacact atattcatat taaacattta cagtctttcc  
 360  
 atctaacttt acacatgtcc taaatcattt tccagcactt ctacataga agtctagttt  
 420  
 tgctctttta aatcaccatc tgtatcaccc ctagtagacg cgagggtttc cccaattaca  
 480  
 tgctgaagag agccagccac caccacacct aaagacatcc aagcagctcc agagcctgcc  
 540  
 tccgaggcca ccccttcgcc acggcagctc cgattccaag aactgattat ctgacactag  
 600

tgaaccagca ctaaaggctg taggatgtga ctacatcaca gttccagaag gaaggggacc  
 660  
 atggccaaga gaagccctaa atgacagaag ctcattaaaa ccaagtcccc caaacctcct  
 720  
 gaaacatcgt tagcaaggag ctactgcttt cctttcttaa acatgttttg ggcattgacca  
 780  
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 840  
 ctgtgtgaaa cttgagaatg tctgattaaa gatttcaatg tatatctaaa aactaactca  
 900  
 aatcgttgac cagcactttc ccagtatcat aacaatgcgg ctgaccctct tctgccttca  
 960  
 ctttacaccc catcatagca cattatttgt gcacaactag tgaggtctgt gcggctcatc  
 1020  
 atccccataa ccaagtcggt ctgtgttgag tcatatcatt ctgtgctggt tttagaagtc  
 1080  
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 aaaaacctga gatacgaggc agcaactagc gacacttaca ggaagggaaa gaacaatgac  
 1200  
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 1260  
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 1380  
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 1440  
 aagacacgcc ggccagcgtt tccaaaaaca gcttggccat ggctttgcac tctattcaca  
 1500  
 actgatcaaa actcaatt  
 1518

&lt;210&gt; 3286

&lt;211&gt; 142

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3286

Met	Lys	Ser	His	Pro	Gly	Gln	Lys	Thr	Val	His	Phe	Ser	Lys	Thr	Glu
1				5					10					15	
Lys	Asn	Leu	Arg	Tyr	Glu	Ala	Ala	Thr	Ser	Asp	Thr	Tyr	Arg	Lys	Gly
			20					25					30		
Lys	Asn	Asn	Asp	Asn	Thr	Arg	Pro	Ala	Pro	Pro	Pro	Lys	Ser	Cys	Cys
		35					40					45			
Cys	Glu	Leu	Arg	Leu	Gln	Lys	Arg	Thr	His	Thr	Val	Ala	Asp	Lys	Thr
	50					55					60				
Gln	Ala	Arg	Arg	Met	Phe	Glu	Ser	Gln	Ser	Ala	Leu	Ser	Leu	Val	Pro
65					70					75				80	
Val	Thr	Ser	Tyr	Val	Gln	Leu	Pro	Gly	Pro	Ile	Pro	Tyr	Ser	Asp	Cys
			85					90					95		
Arg	Leu	Arg	Thr	Glu	Asp	Ala	Pro	Leu	Leu	Ser	Leu	His	Phe	Asp	Leu
			100				105					110			
Leu	Phe	Pro	Leu	Lys	Thr	Arg	Arg	Pro	Ala	Phe	Pro	Lys	Thr	Ala	Trp



115	120	125
Pro Trp Leu Cys Thr Leu Phe Thr Thr Asp Gln Asn Ser Ile		
130	135	140

<210> 3287  
 <211> 921  
 <212> DNA  
 <213> Homo sapiens

<400> 3287  
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 gagegcgcgg cttggcggag tagggggcac ggccagcgca gtcagagctg gcgccctcct  
 120  
 gcgtaagccc aatccgggaa actcgttgcc cctctcctgg gaaaggaacg tccctcccca  
 180  
 gggttgagag tgactcgggc accatcaccc tgtgctgtaa agacctgca gtgctgcagc  
 240  
 tggaatataga gggcgcggaa gcgacgctgg gcatcgccc ctccatcgag gtgtgccgag  
 300  
 ggagctccc agccctttaa gctctcctg tctcgctag aggggaataa aaagggtgctt  
 360  
 ctgttcaaag aggtccgca gccgcagcta aatggcaggg ggatgcaggg tgggccgggg  
 420  
 tacttgagaga ggccgaagct gaagctacag gactgagggg ctggaaaggg cgcgggagag  
 480  
 acaattccga cctcccccag agcccctgac ttccttctcc ggacgctgtc ctccctggaa  
 540  
 tcagtcatca cctccttccc tttattctac cgtcccaagg gcctgagatt gggcgactcc  
 600  
 tggcacttcc tcccgccga actctactgc aagagagtag ctgcgaagt gggcgcggtc  
 660  
 gtaggggccc gggaagggtg aagcgccggg cctggaagag gcgcggggac agggcactcc  
 720  
 ctgggtgccc tagacctggc ctctctctc cctgcgctgc agaccaacgc ggccggaaaa  
 780  
 aggctggagg gggcttggca gccaaagctaa ttcgggagaa tttctatgat tatgattttt  
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 ttattaaata gttataaaaa aatagggtat acaatttaaa ggactcttag tttaaaacaa  
 900  
 aatctattct gagaactctt c  
 921

<210> 3288  
 <211> 148  
 <212> PRT  
 <213> Homo sapiens

<400> 3288  
 Met Thr Asp Ser Arg Glu Asp Ser Val Arg Arg Arg Lys Ser Gly Ala  
 1 5 10 15  
 Leu Gly Arg Val Gly Ile Val Ser Pro Ala Pro Phe Pro Ala Pro Gln  
 20 25 30  
 Ser Cys Ser Phe Ser Phe Gly Leu Ser Lys Tyr Pro Gly Pro Pro Cys



35 40 45  
 Ile Pro Leu Pro Phe Ser Cys Gly Cys Gly Ala Ser Leu Asn Arg Ser  
 50 55 60  
 Thr Phe Leu Phe Pro Ser Thr Arg Asp Arg Glu Ser Leu Lys Gly Ser  
 65 70 75 80  
 Gly Ala Pro Ser Ala His Leu Asp Gly Ala Gly Asp Ala Gln Arg Arg  
 85 90 95  
 Phe Arg Ala Leu Tyr Phe Gln Leu Gln His Ser Gln Val Phe Thr Ala  
 100 105 110  
 Gln Gly Asp Gly Ala Arg Val Thr Arg Asn Pro Gly Glu Gly Arg Ser  
 115 120 125  
 Phe Pro Arg Arg Gly Ala Thr Ser Phe Pro Asp Trp Ala Tyr Ala Gly  
 130 135 140  
 Gly Arg Gln Leu  
 145

&lt;210&gt; 3289

&lt;211&gt; 554

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3289

acgcgtagtg atctgtgcga ggtcacacag caaatctgtg ggaggctagg gttcaaacct  
 60  
 cacagcatgg actcttccct gtgtcccggt cctgccttcg cctcctccca gctcttctct  
 120  
 cccagcctcc tagcccaata tcagggccgg aggcactgga gaacttccgg ctaaggcagg  
 180  
 cctcccctcc cattcacaga gccctgccag ggtggctggc aatggggaag tccagggcag  
 240  
 agatggggac agaggggacg ccttggtatc gactctgtgg tgggtggacc acctccctga  
 300  
 gaccaggcat ccacgtcggg cagcacatgc taccagtc acagaagagg aaacagaggc  
 360  
 tccgagagga agggactgtg tccagggcgg gaccagggc cttctgcact gggatcaatga  
 420  
 gccaaagcaca tcacccacgc ccttggggag caggagccgg gccttgcagg gtgaggagct  
 480  
 gggaaaagca aagctccatg gaaggcaacc gggaatcatc acaaataagga cataactagt  
 540  
 ataagctgca attg  
 554

&lt;210&gt; 3290

&lt;211&gt; 129

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3290

Met Ile Pro Gly Cys Leu Pro Trp Ser Phe Ala Phe Pro Ser Ser Ser  
 1 5 10 15  
 Pro Cys Lys Ala Arg Leu Leu Leu Pro Lys Gly Trp Gly Asp Val Leu  
 20 25 30  
 Gly Ser Leu Thr Gln Cys Arg Arg Ala Trp Val Pro Pro Trp Thr Gln

35	40	45
Ser Leu Pro Leu Gly Ala	Ser Val Ser Ser Ser	Val Asp Trp Val Ala
50	55	60
Cys Ala Ala Arg Arg Gly	Cys Leu Val Ser Gly	Arg Trp Ser Thr His
65	70	75
His Arg Val Glu Ser Lys	Ala Ser Pro Leu Ser	Pro Ser Leu Pro Trp
85	90	95
Thr Ser Pro Leu Pro Ala	Thr Leu Ala Gly Leu	Cys Glu Trp Glu Gly
100	105	110
Arg Pro Ala Leu Ala Gly	Ser Ser Pro Val Pro	Pro Ala Leu Ile Leu
115	120	125

Gly

&lt;210&gt; 3291

&lt;211&gt; 1075

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3291

nngcntatgg ggtgcgcttt acgcgactgc cgctggagcg cgggtgtgggt ggctgcactt  
60  
ggctggagge ccccgcgcggt gccttcgcct gcgccgtgga gcgcgacgcc cgggcccgcg  
120  
tgggcccctt ctcccgccac gcctgcggtg aggtccccg ccccgctctcc taccatagct  
180  
gcctctgtcc ctccgcactg gctgttcacc tggctagctg tgtccgtttc tcaaccgga  
240  
agcgagtctn ggcgtcgacc gctgccgcca cccagttac cccctccac cccgccgtcc  
300  
cttccctagc ctacatagcc cttggccatg gcccggcctg gtcccacctc tgatgtccg  
360  
ccccccacag gtggacagac gccttcgnnt gggcctgagc acttgcggcc ggcacatgtc  
420  
cgctcaccgc gtgtccgggg ccctggcgcg ggtcctggaa gtaccctagc gggccacacc  
480  
ctgacagccg agctgatggc gcaccccgcc taccacagtg tgcctccacc ggcggctgcg  
540  
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600  
ccgcgcccac gctgcggggc cagcttgccc aggatggcgt gcagctttgc gccctcgacg  
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720  
tggaaccctc ccnntactct gacccctac agacaaccaa gcactaatcc ccttagtacc  
780  
aagaaagggg agccaggatt tagtcctggc ccagcccaga gctgggacct ggagcacgat  
840  
ctgttgactt ccctgggtag gacactgcca cctctgggct caggtcctca tgcctccaaa  
900  
tggcatctag agtttgagca gccttcttgg ctgcaggcag gcctagcctg tggcagcggg  
960  
ctagggcccc cagagcattt ggtgcccctc catgttgcaa tgcaaacacc ttcaccactg  
1020

gggcagtggg gagagatggc tatattaata aaataacgtg tgtctttcaa aaaaa  
1075

<210> 3292  
<211> 102  
<212> PRT  
<213> Homo sapiens

<400> 3292  
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Val Ala Ala Leu Gly Trp Arg Pro Pro Arg Val Pro Ser Pro Ala Pro  
20 25 30  
Trp Ser Ala Thr Pro Gly Pro Pro Trp Ala Pro Ser Pro Ala Thr Pro  
35 40 45  
Ala Val Arg Leu Pro Ala Pro Ser Pro Thr Ile Ala Ala Ser Val Pro  
50 55 60  
Pro His Trp Leu Phe Thr Trp Leu Ala Val Ser Val Ser Gln Pro Gly  
65 70 75 80  
Ser Glu Ser Xaa Arg Arg Pro Leu Pro Pro Gln Leu Pro Pro Pro  
85 90 95  
Thr Pro Pro Ser Leu Pro  
100

<210> 3293  
<211> 2362  
<212> DNA  
<213> Homo sapiens

<400> 3293  
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120  
gcaggacgcc gacacctacc cctcagcaga cgccggagag aaatgagtag caacaaagag  
180  
cagcggtcag cagtgttcgt gatectcttt gccctcatca ccctcctcat cctctacagc  
240  
tccaacagtg ccaatgaggt cttccattac ggctccctgc ggggccgtag ccgccgacct  
300  
gtcaacctca agaagtggag catcactgac ggctatgtcc ccattctcgg caacaagaca  
360  
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420  
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480  
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540  
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600  
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660  
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720

cggcaatttg acgacctctt ccgggggtgag acggggcaagg acagggagaa gtctcattcg  
780  
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840  
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1020  
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1200  
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1380  
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1920  
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1980  
aactgttgga ggcgcctttg gggctgcccc tttgtctgga gtcactgggg gcttccgagg  
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2160  
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2220  
accagatgga ggaggccagc agctagccat tgcacactgg ggtgatgggt gggggcggtg  
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2340

aaaaaaaaaa aaaaaaaaaa aa  
2362

<210> 3294  
<211> 353  
<212> PRT  
<213> Homo sapiens

<400> 3294  
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Gln Arg Gly His Met Ala Cys Ser Arg Pro Pro Ser Gln Cys Glu Pro  
20 25 30  
Thr Ser Leu Pro Pro Gly Pro Pro Ala Gly Arg Arg His Leu Pro Leu  
35 40 45  
Ser Arg Arg Arg Arg Glu Met Ser Ser Asn Lys Glu Gln Arg Ser Ala  
50 55 60  
Val Phe Val Ile Leu Phe Ala Leu Ile Thr Ile Leu Ile Leu Tyr Ser  
65 70 75 80  
Ser Asn Ser Ala Asn Glu Val Phe His Tyr Gly Ser Leu Arg Gly Arg  
85 90 95  
Ser Arg Arg Pro Val Asn Leu Lys Lys Trp Ser Ile Thr Asp Gly Tyr  
100 105 110  
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Thr Gly Tyr Ser Ala Asp Val Gly Asn Lys Thr Thr Tyr Arg Val Val  
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225 230 235 240  
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 <212> DNA  
 <213> Homo sapiens

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<400> 3296  
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 Thr Glu His Ala Asp Pro Leu Pro Phe Pro Ser Val Ser Leu Ser Gly  
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 Phe Thr Val Gly Thr Leu Ser Glu Thr Ser Thr Gly Gly Pro Ala Thr  
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 Pro Thr Trp Lys Glu Cys Pro Ile Cys Lys Glu Arg Phe Pro Ala Glu  
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 Ser Asp Lys Asp Ala Leu Glu Asp His Met Asp Gly His Phe Phe Phe  
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115

120

&lt;210&gt; 3297

&lt;211&gt; 3176

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3297

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<212> PRT  
<213> Homo sapiens

<400> 3298  
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Cys Val Cys Leu Tyr Val Cys Ile Cys Val Tyr Val Cys Val Cys His  
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Pro His Ser Gln Pro Trp Glu Glu Ser Val Asn Pro Pro Thr Gly Gln  
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Asp Gln Leu Trp Trp Cys Leu Ala Asp Ser Gly Asn Val Thr Phe His  
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180 185 190  
Leu Lys Glu Cys Phe Phe Phe Pro Phe Val Ile Glu Arg Ala Gln Pro  
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Cys Val His Trp Leu Thr Val Thr Asn Leu Arg Val Gly Asp Ser His  
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&lt;210&gt; 3300

&lt;211&gt; 219

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3300

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35	40	45	
Ser Ile Gln Gln Phe Thr Glu Met Asn Leu Leu Ser Asp Tyr Arg Phe			
50	55	60	
Leu Glu Asp Val Ala Arg Thr Ala Asp His Ile Ser Arg Asp Ala Phe			
65	70	75	80
Leu Lys Arg Pro Ile Ser Asn Lys Tyr Met Tyr Phe Met Lys Asn Arg			
85	90	95	
Ala Arg Ser Lys Gly Ile Asn Leu Lys Leu Leu Pro Asn Gly Phe Thr			
100	105	110	
Lys Arg Lys Glu Asn Ser Thr Phe Phe Asp Lys Lys Lys Gln Gln Phe			
115	120	125	
Cys Trp His Val Lys Leu Gln Phe Pro Gln Ser Gln Ala Glu Tyr Ile			
130	135	140	
Glu Lys Arg Val Pro Asp Asp Lys Thr Ile Asn Glu Ile Leu Lys Pro			
145	150	155	160
Tyr Ile Asp Pro Glu Lys Ser Asp Pro Val Ile Arg Gln Arg Leu Lys			
165	170	175	
Ala Tyr Ile Arg Ser Gln Thr Gly Val Gln Ile Leu Met Lys Ile Glu			
180	185	190	
Tyr Met Gln Gln Asn Leu Val Arg Tyr Tyr Glu Leu Asp Pro Tyr Lys			
195	200	205	
Ser Leu Leu Asp Asn Leu Arg Asn Lys Val Ile			
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&lt;210&gt; 3301

&lt;211&gt; 2109

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3301

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2109

&lt;210&gt; 3302

&lt;211&gt; 323

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3302

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Ile Asp Ile Phe Pro Val Thr Asn Lys Asp Phe Arg Asp Phe Val Arg
65           70           75           80
Glu Lys Lys Tyr Arg Thr Glu Ala Glu Met Phe Gly Trp Ser Phe Val
          85           90           95
Phe Glu Asp Phe Val Ser Asp Glu Leu Arg Asn Lys Ala Thr Gln Pro
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Met Lys Val Lys Phe Thr His Gly Gly Thr Gly Ser Ser Gln Thr Ala
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Pro Thr Cys Gly Arg Glu Ser Ser Pro Arg Glu Thr Lys Leu Arg Met
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145          150          155          160
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Pro Tyr Gln Ala Ala Glu Gln Asp Met Arg Val Leu Arg Gly His Pro
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His Val Ala Asn Ser Ala Ile Pro Ser Ser Arg Ala Ser Ala Ser Gly
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Lys Asn Phe Pro Phe Pro Val Ser His Pro Ser Val Ala Gly Ala Ser
          275          280          285
His Gln Gly Arg Arg Gly Leu Ser Leu Leu Cys Phe Gly Glu Gly Ala
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Gln Cys Val Leu Thr Met Ala Gly Gly Gln Val Phe Leu Leu Glu Ala
305          310          315          320
Lys Tyr Tyr

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&lt;210&gt; 3303

&lt;211&gt; 699

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3303



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&lt;210&gt; 3304

&lt;211&gt; 233

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3304

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Glu	Leu	Gly	Glu	Pro	Asp	Pro	Glu	Gln	Lys	Arg	Ser	Arg	Ala	Arg	Glu



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&lt;210&gt; 3305

&lt;211&gt; 2717

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3305

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 <213> Homo sapiens

<400> 3306

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Ile	Ser	Leu	Val	Met	Lys	Thr	Pro	Arg	Val	Ala	Lys	Asn	Glu	Ala	Leu
		35					40					45			
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Gly	Gln	Leu	Val	Tyr	Ser	Trp	Thr	Ala	Gly	Gln	Gly	Gln	Ala	Val	Arg
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Ile	Cys	Gln	Ile	Thr	Thr	Ser	Leu	Tyr	Arg	Ala	Gln	Gln	Ile	Ile	Gln
				165					170					175	
Leu	Asn	Ile	Gln	Ala	Ser	Pro	Lys	Val	Arg	Leu	Ser	Leu	Ala	Asn	Glu
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Ala	Leu	Leu	Pro	Thr	Leu	Ile	Cys	Asp	Ile	Ala	Gly	Tyr	Tyr	Pro	Leu
	195						200					205			
Asp	Val	Val	Val	Thr	Trp	Thr	Arg	Glu	Glu	Leu	Gly	Gly	Ser	Pro	Ala
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Gln	Val	Ser	Gly	Ala	Ser	Phe	Ser	Ser	Leu	Arg	Gln	Ser	Val	Ala	Gly
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Thr	Tyr	Ser	Ile	Ser	Ser	Ser	Leu	Thr	Ala	Glu	Pro	Gly	Leu	Cys	Arg
				245					250					255	
Cys	His	Leu	His	Leu	Pro	Gly	His	Thr	His	Leu	Ser	Gly	Gly	Ala	Pro
		260						265					270		
Trp	Gly	Gln	His	Pro	Gly	Cys	Pro	Thr	Arg	Ala	Glu	Asn	Ser	Leu	Gly
	275						280					285			
Ser	His	Leu	Cys	Gln	Gln	Ser	Leu	Pro	Ser	Cys	Thr	Asp	Val	Pro	Gly
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<212> PRT

<213> Homo sapiens

<400> 3308

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			20					25					30		
Pro	Arg	Trp	Glu	Pro	Cys	Leu	Gly	Gln	Gly	Gly	Arg	Val	Asp	Gly	Ser
		35					40					45			
Trp	Asp	Cys	Asp	Ile	Gly	Arg	Arg	Gly	Arg	Ser	Pro	Ala	Leu	Ser	Ser
	50					55				60					
Ala	Gly	Trp	Ala	Gly	Ile	His	Leu	Ala	Ala	Ser	Gln	Gly	Leu	Cys	Pro
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Ala	Gly	Trp	Ser	Leu	Cys	Cys	Pro	Asn	Gln	Val	Ser	Thr	Phe	Pro	Ala
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<211> 737

<212> DNA

<213> Homo sapiens

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 Gln Thr His Pro Asp Val Pro Val Gly Asp Glu Ser Gln Ala Arg Val  
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 Leu His Met Val Gly Asp Lys Pro Val Phe Ser Phe Gln Pro Arg Gly  
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 His Leu Glu Ile Gly Glu Lys Leu Asp Ile Ile Arg Gln Lys Arg Leu  
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 Ser His Val Ser Gly His Arg Ser Tyr Tyr Leu Arg Gly Ala Gly Ala  
 100 105 110  
 Leu Leu Gln His Gly Leu Val Asn Phe Thr Phe Asn Lys Leu Leu Arg  
 115 120 125  
 Arg Gly Phe Thr Pro Met Thr Val Pro Asp Leu Leu Arg Gly Ala Val  
 130 135 140  
 Phe Glu Gly Cys Gly Met Thr Pro Asn Ala Asn Pro Ser Gln Ile Tyr  
 145 150 155 160  
 Asn Ile Asp Pro Ala Arg Phe Lys Asp Leu Asn Leu Ala Gly Thr Ala  
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 35 40 45  
 Gln Ile Gln Arg Ser Pro Asn Arg Trp Ser Ser Val Phe Trp Lys Val  
 50 55 60  
 Gly Leu Ile Ser Gly Thr Val Phe Val Ile Leu Gly Leu Thr Val Leu  
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 <212> DNA  
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&lt;210&gt; 3314

&lt;211&gt; 537

&lt;212&gt; PRT



&lt;213&gt; Homo sapiens

&lt;400&gt; 3314

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Ala	Arg	Thr	Ala	Val	Lys	Arg	Arg	Pro	Gly	Ala	Gly	Arg	Val	Gly	Gly	35	40	45	
Gly	Gly	Gly	Arg	Xaa	Arg	Ser	Arg	Gln	Pro	Glu	Gly	Leu	Arg	Ser	His	50	55	60	
His	Lys	Val	Ser	Val	Ser	Pro	Val	Val	His	Val	Arg	Gly	Leu	Cys	Glu	65	70	75	80
Ser	Val	Val	Glu	Ala	Asp	Leu	Val	Glu	Ala	Leu	Glu	Lys	Phe	Gly	Thr	85	90	95	
Ile	Cys	Tyr	Val	Met	Met	Met	Pro	Phe	Lys	Arg	Gln	Ala	Leu	Val	Glu	100	105	110	
Phe	Glu	Asn	Ile	Asp	Ser	Ala	Lys	Glu	Cys	Val	Thr	Phe	Ala	Ala	Asp	115	120	125	
Glu	Pro	Val	Tyr	Ile	Ala	Gly	Gln	Gln	Ala	Phe	Phe	Asn	Tyr	Ser	Thr	130	135	140	
Ser	Lys	Arg	Ile	Thr	Arg	Pro	Gly	Asn	Thr	Asp	Asp	Pro	Ser	Gly	Gly	145	150	155	160
Asn	Lys	Val	Leu	Leu	Leu	Ser	Ile	Gln	Asn	Pro	Leu	Tyr	Pro	Ile	Thr	165	170	175	
Val	Asp	Val	Leu	Tyr	Thr	Val	Cys	Asn	Pro	Val	Gly	Lys	Val	Gln	Arg	180	185	190	
Ile	Val	Ile	Phe	Lys	Arg	Asn	Gly	Ile	Gln	Ala	Met	Val	Glu	Phe	Glu	195	200	205	
Ser	Val	Leu	Cys	Ala	Gln	Lys	Ala	Lys	Ala	Ala	Leu	Asn	Gly	Ala	Asp	210	215	220	
Ile	Tyr	Ala	Gly	Cys	Cys	Thr	Leu	Lys	Ile	Glu	Tyr	Ala	Arg	Pro	Thr	225	230	235	240
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Pro	Tyr	Leu	Gly	Arg	Arg	Asp	Arg	Gly	Lys	Gly	Arg	Gln	Arg	Gln	Ala	260	265	270	
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Asp	Thr	Pro	Glu	Leu	Val	Ala	Tyr	Pro	Leu	Pro	Gln	Ala	Ser	Ser	Ser	305	310	315	320
Tyr	Met	His	Gly	Gly	Asn	Pro	Ser	Gly	Ser	Val	Val	Met	Val	Ser	Gly	325	330	335	
Leu	His	Gln	Leu	Lys	Met	Asn	Cys	Ser	Arg	Val	Phe	Asn	Leu	Phe	Cys	340	345	350	
Leu	Tyr	Gly	Asn	Ile	Glu	Lys	Val	Lys	Phe	Met	Lys	Thr	Ile	Pro	Gly	355	360	365	
Thr	Ala	Leu	Val	Glu	Met	Gly	Asp	Glu	Tyr	Ala	Val	Glu	Arg	Ala	Val	370	375	380	
Thr	His	Leu	Asn	Asn	Val	Lys	Leu	Phe	Gly	Lys	Arg	Leu	Asn	Val	Cys	385	390	395	400
Val	Ser	Lys	Gln	His	Ser	Val	Val	Pro	Ser	Gln	Ile	Phe	Glu	Leu	Glu				

				405					410					415					
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				420					425					430					
Phe	Thr	Ser	Ala	Gly	Gln	Ala	Ser	Lys	Asn	Ile	Ile	Gln	Pro	Pro	Ser				
				435					440					445					
Cys	Val	Leu	His	Tyr	Tyr	Asn	Val	Pro	Leu	Cys	Val	Thr	Glu	Glu	Thr				
				450					455					460					
Phe	Thr	Lys	Leu	Cys	Asn	Asp	His	Glu	Val	Leu	Thr	Phe	Ile	Lys	Tyr				
Lys	Val	Phe	Asp	Ala	Lys	Pro	Ser	Ala	Lys	Thr	Leu	Ser	Gly	Leu	Leu				
				485					490					495					
Glu	Trp	Glu	Cys	Lys	Thr	Asp	Ala	Val	Glu	Ala	Leu	Thr	Ala	Leu	Asn				
				500					505					510					
His	Tyr	Gln	Ile	Arg	Val	Pro	Asn	Gly	Ser	Asn	Pro	Tyr	Thr	Leu	Lys				
				515					520					525					
Leu	Cys	Phe	Ser	Thr	Ser	Ser	His	Leu											
				530				535											

&lt;210&gt; 3315

&lt;211&gt; 934

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3315

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<212> PRT  
<213> Homo sapiens

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Val Pro Lys Thr Ser Leu Ser Ser Pro Pro Trp Pro Glu Val Val Leu  
35 40 45  
Pro Asp Pro Val Glu Glu Thr Arg His His Ala Glu Val Val Lys Lys  
50 55 60  
Val Asn Glu Met Ile Val Thr Gly Gln Tyr Gly Arg Leu Phe Ala Val  
65 70 75 80  
Val His Phe Ala Ser Arg Gln Trp Lys Val Thr Ser Glu Asp Leu Ile  
85 90 95  
Leu Ile Gly Asn Glu Leu Asp Leu Ala Cys Gly Glu Arg Ile Arg Leu  
100 105 110  
Glu Lys Val Leu Leu Val Gly Ala Asp Asn Phe Thr Leu Leu Gly Lys  
115 120 125  
Pro Leu Leu Gly Lys Asp Leu Val Arg Val Glu Ala Thr Val Ile Glu  
130 135 140  
Lys Thr Glu Ser Trp Pro Arg Ile Ile Met Arg Phe Arg Lys Arg Lys  
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<210> 3317  
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<212> DNA  
<213> Homo sapiens

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120  
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180  
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240  
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300  
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360  
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420

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 660  
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 1665

&lt;210&gt; 3318

&lt;211&gt; 253

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3318

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Leu	Glu	Tyr	Ile	Lys	Asn	Arg	Lys	Leu	Glu	Lys	Gln	Arg	Ile	Arg	Glu
			20					25					30		
Glu	Lys	Arg	Glu	Glu	Arg	Arg	Arg	Arg	Glu	Leu	Glu	Lys	Lys	Arg	Leu

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120
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180
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240
gtcccaaagg ccggcaagat ggtgtcctgg atgatctgtc gcctgggtggg gctgggtgttt
300
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360
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420
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480
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600

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 1200  
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&lt;210&gt; 3320

&lt;211&gt; 256

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3320

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			20					25					30		
Glu	Tyr	Val	Arg	Trp	Met	Met	Tyr	Trp	Ile	Val	Phe	Ala	Leu	Phe	Met
		35					40					45			
Ala	Ala	Glu	Ile	Val	Thr	Asp	Ile	Phe	Ile	Ser	Trp	Phe	Pro	Phe	Tyr
	50					55				60					
Tyr	Glu	Ile	Lys	Met	Ala	Phe	Val	Leu	Trp	Leu	Ser	Pro	Tyr	Thr	
65				70				75					80		
Lys	Gly	Ala	Ser	Leu	Leu	Tyr	Arg	Lys	Phe	Val	His	Pro	Ser	Leu	Ser
			85					90					95		
Arg	His	Glu	Lys	Glu	Ile	Asp	Ala	Tyr	Ile	Val	Gln	Ala	Lys	Glu	Arg
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Ser	Tyr	Glu	Thr	Val	Leu	Ser	Phe	Gly	Lys	Arg	Gly	Leu	Asn	Ile	Ala



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180					
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240					
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300					
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360					
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420					
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660					
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780					
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840					
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900					



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&lt;210&gt; 3322

&lt;211&gt; 454

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3322

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Gly	Met	Asn	Ser	Gly	Gly	Gly	Phe	Gly	Leu	Gly	Leu	Gly	Phe	Gly	Leu
			20					25					30		
Thr	Pro	Thr	Ser	Val	Ile	Gln	Val	Thr	Asn	Leu	Ser	Ser	Ala	Val	Thr
		35					40					45			
Ser	Glu	Gln	Met	Arg	Thr	Leu	Phe	Ser	Phe	Leu	Gly	Glu	Ile	Glu	Glu
	50					55				60					
Leu	Arg	Leu	Tyr	Pro	Pro	Asp	Asn	Ala	Pro	Leu	Ala	Phe	Ser	Ser	Lys
65				70					75					80	
Val	Cys	Tyr	Val	Lys	Phe	Arg	Asp	Pro	Ser	Ser	Val	Gly	Val	Ala	Gln
			85				90						95		
His	Leu	Thr	Asn	Thr	Val	Phe	Ile	Asp	Arg	Ala	Leu	Ile	Val	Val	Pro
			100				105						110		
Cys	Ala	Glu	Gly	Lys	Ile	Pro	Glu	Glu	Ser	Lys	Ala	Leu	Ser	Leu	Leu
	115					120					125				
Ala	Pro	Ala	Pro	Thr	Met	Thr	Ser	Leu	Met	Pro	Gly	Ala	Gly	Leu	Leu
	130				135						140				
Pro	Ile	Pro	Thr	Pro	Asn	Pro	Leu	Thr	Thr	Leu	Gly	Val	Ser	Leu	Ser
145				150					155					160	
Ser	Leu	Gly	Ala	Ile	Pro	Ala	Ala	Ala	Leu	Asp	Pro	Asn	Ile	Ala	Thr
			165				170						175		
Leu	Gly	Glu	Ile	Pro	Gln	Pro	Pro	Leu	Met	Gly	Asn	Val	Asp	Pro	Ser
		180				185					190				
Lys	Ile	Asp	Glu	Ile	Arg	Arg	Thr	Val	Tyr	Val	Gly	Asn	Leu	Asn	Ser

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<211> 949
<212> DNA
<213> Homo sapiens
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120
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180
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240
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300
ggtggagaga aagatctgga aatacttgag gttattacat actagattag cttctaattgt
360
gaaccatttt tctttttaaca gtgataaatt attatttccg aagttaactg ttcccttgggt
420
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 720  
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 780  
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 949

<210> 3324  
 <211> 122  
 <212> PRT  
 <213> Homo sapiens

<400> 3324  
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 Thr Thr Val Ile Pro Arg Val Tyr Thr Tyr Tyr Val Ser Thr Val Leu  
 35 40 45  
 Phe Ala Ile Phe Gly Ile Arg Met Leu Arg Glu Gly Leu Lys Met Ser  
 50 55 60  
 Pro Asp Glu Gly Gln Glu Glu Leu Glu Glu Val Gln Ala Glu Leu Lys  
 65 70 75 80  
 Lys Lys Asp Glu Glu Val Ser His Gly Thr Val Asp Leu Asp Gln Lys  
 85 90 95  
 Gly Thr Gln Leu Gly Ile Asn Thr Leu Gln Arg Phe Leu Ser Gly Pro  
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 Ile Cys Val Ile Cys Gly Ala Thr Gln Lys  
 115 120

<210> 3325  
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 <212> DNA  
 <213> Homo sapiens

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1800

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<211> 521

<212> PRT

<213> Homo sapiens

<400> 3328

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1980  
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2160  
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2220  
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2280



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2422

<210> 3334  
<211> 672  
<212> PRT  
<213> Homo sapiens

<400> 3334  
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Ile Tyr Glu Ala Gly Ala Gly Asp Arg Met Ala Gly Ala Pro Met Ala  
20 25 30  
Ala Ala Val Gln Pro Ala Glu Val Thr Val Glu Val Gly Glu Asp Leu  
35 40 45  
His Met His His Val Arg Asp Arg Glu Met Pro Glu Ala Leu Glu Phe  
50 55 60  
Asn Leu Ser Ala Asn Pro Glu Ser Ser Thr Ile Phe Gln Arg Asn Ser  
65 70 75 80  
Gln Thr Glu Ala Leu Glu Phe Asn Pro Ser Ala Asn Pro Glu Ala Ser  
85 90 95  
Thr Ile Phe Gln Arg Asn Ser Gln Thr Asp Val Val Glu Ile Arg Arg  
100 105 110  
Ser Asn Cys Thr Asn His Val Ser Ala Val Arg Phe Ser Gln Gln Tyr  
115 120 125  
Ser Leu Cys Ser Thr Ile Phe Leu Asp Asp Ser Thr Ala Ile Gln His  
130 135 140  
Tyr Leu Thr Met Thr Ile Ile Ser Val Thr Leu Glu Ile Pro His His  
145 150 155 160  
Ile Thr Gln Arg Asp Ala Asp Arg Thr Leu Ser Ile Pro Asp Glu Gln  
165 170 175  
Leu His Ser Phe Ala Val Ser Thr Val His Ile Met Lys Lys Arg Asn  
180 185 190  
Gly Gly Gly Ser Leu Asn Asn Tyr Ser Ser Ser Ile Pro Ser Thr Pro  
195 200 205  
Ser Thr Ser Gln Glu Asp Pro Gln Phe Ser Val Pro Pro Thr Ala Asn  
210 215 220  
Thr Pro Thr Pro Val Cys Lys Arg Ser Met Arg Trp Ser Asn Leu Phe  
225 230 235 240  
Thr Ser Glu Lys Gly Ser His Pro Asp Lys Glu Arg Lys Ala Pro Glu  
245 250 255  
Asn His Ala Asp Thr Ile Gly Ser Gly Arg Ala Ile Pro Ile Lys Gln  
260 265 270  
Gly Met Leu Leu Lys Arg Ser Gly Lys Trp Leu Lys Thr Trp Lys Lys  
275 280 285  
Lys Tyr Val Thr Leu Cys Ser Asn Gly Met Leu Thr Tyr Tyr Ser Ser  
290 295 300  
Leu Gly Asp Tyr Met Lys Asn Ile His Lys Lys Glu Ile Asp Leu Gln  
305 310 315 320  
Thr Ser Thr Ile Lys Val Pro Gly Lys Trp Pro Ser Leu Ala Thr Ser

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<210> 3335
<211> 477
<212> DNA
<213> Homo sapiens
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120
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cccagactgc ttgttgaagg ggttgaggtg ggcctgccgg aaacgggcca gcttctcatc  
180  
atattccata gcatcccacc tgcctgcct gccagggccc aggggctcgc agggacagga  
240  
tggccattcc tctagggctg ctggccacgg aagcctggcc gtgggttcgg cacctgctga  
300  
ccgccgcctc gcatttgccc tgagacaggg ctggacagcc aggattaccg ctgtgccgag  
360  
tgccgggccc ccatctctct gcgggggtgtg cccagtgagg ccaggcagtg cgactacacc  
420  
ggccagtact actgcagccc ctgccactgg aacgccctgg ctgtgatccc tgcacgc  
477

&lt;210&gt; 3336

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3336

Pro	Pro	Pro	Arg	Ile	Cys	Pro	Glu	Thr	Gly	Leu	Asp	Ser	Gln	Asp	Tyr
1				5					10					15	
Arg	Cys	Ala	Glu	Cys	Arg	Ala	Pro	Ile	Ser	Leu	Arg	Gly	Val	Pro	Ser
			20					25					30		
Glu	Ala	Arg	Gln	Cys	Asp	Tyr	Thr	Gly	Gln	Tyr	Tyr	Cys	Ser	Pro	Cys
		35					40					45			
His	Trp	Asn	Ala	Leu	Ala	Val	Ile	Pro	Ala	Arg					
	50					55									

&lt;210&gt; 3337

&lt;211&gt; 679

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3337

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aaaaagagaa agagagacac cccacagaga ggggggaagg aggttagatg gggcagtctt  
120  
agcttagcct ccaaagacac agatagagtg agagagagag acagagagag acacagagac  
180  
agacagagac caaaacagaa gcggcaaacg gcaaaaacga agcagaatca atgcaagtta  
240  
gagaaaaaaa taaaactaaa catcagagca gggaaaagtc atctactccg tatcacacct  
300  
gtgtattagc ttaaccagaa ataagctgga agaggagttc agtagcctct cageccctta  
360  
aagatgttgg tcataccccc tctttcaccg tctgagtcga gaggacacca agccaaacaa  
420  
actgtgcccc aaactgggtc atctagtcct cccaggtcct tccttgctaa ctcgaggaaa  
480  
caaggaaaac caactttgga tggcaacttc aacaaggtaa ccctcctttc ttcaatggcc  
540  
agactgatgc ccactgacaa tggctttgag atgcttggac agcagactgt catgtcaaga  
600

ctgcccagac ccccaccaca ctgtggaaaa gggcagcacc agaccactg gagatgaggc  
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tcttgagcca agtgctagc  
679

<210> 3338  
<211> 102  
<212> PRT  
<213> Homo sapiens

<400> 3338  
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Lys Lys Gly Lys Lys Lys Arg Lys Arg Asp Thr Pro Gln Arg Gly Gly  
20 25 30  
Lys Glu Val Arg Trp Gly Ser Leu Ser Leu Ala Ser Lys Asp Thr Asp  
35 40 45  
Arg Val Arg Glu Arg Asp Arg Glu Arg His Arg Asp Arg Gln Arg Pro  
50 55 60  
Lys Gln Lys Arg Gln Thr Ala Lys Thr Lys Gln Asn Gln Cys Lys Leu  
65 70 75 80  
Glu Lys Lys Ile Lys Leu Asn Ile Arg Ala Gly Lys Ser His Leu Leu  
85 90 95  
Arg Ile Thr Pro Val Tyr  
100

<210> 3339  
<211> 1341  
<212> DNA  
<213> Homo sapiens

<400> 3339  
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aggcatgaca caggtttgga ttcattaagt cctcatgcag aattatattc ttctcgataa  
120  
agaagccagt tccatccagg atccactatc tacacaccta tggtacaaca ttatatcaaa  
180  
tctggtatct gaagaaaaga tacacattta atatgttcat ttaagttacg tattttgcag  
240  
aaagattaaa aattcattca cacaaaactc aaaaactgta ttaaaagttt gaatataaaa  
300  
ctcagatcca cctggaatga ctaaagaatg gaagttctgt atccacctgt gttaaaactg  
360  
gtaaatgtaa tgatatctgt taccaataaa acgcattcgt ttattcaatg taagtaagtt  
420  
atctaatttt aacaatatgg caccctaaaa accaactgta tttttatgat gaggcacttt  
480  
tgtagtgat gaaacaaaa gaacaaattt gctgcacact gatgccagcg attttcttca  
540  
gtgattttgg gtatatgcta tgtagtaagt tgcaacaaat accttgctca tttgtataca  
600  
actatccgat atatttttaa tatatatata tatatatggt cttctggctg tagtaatgca  
660

ctgtaaagct atttcacagt gcaaaatgat gaaaccagcc caaatgaagg ctgcataata  
 720  
 acaatttctga tacaagaaaa tattgacaga gttactggaa cgtgtaacag tagttttttt  
 780  
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 840  
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 900  
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 960  
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 1080  
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 1320  
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 1341

&lt;210&gt; 3340

&lt;211&gt; 86

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3340

Met	Ser	Thr	Leu	Ala	Ser	Lys	Lys	Thr	Thr	Val	Thr	Arg	Ser	Ser	Asn
1				5					10					15	
Ser	Val	Asn	Ile	Phe	Leu	Tyr	Gln	Asn	Cys	Tyr	Tyr	Ala	Ala	Phe	Ile
		20						25					30		
Trp	Ala	Gly	Phe	Ile	Ile	Leu	His	Cys	Glu	Ile	Ala	Leu	Gln	Cys	Ile
		35					40					45			
Thr	Thr	Ala	Arg	Arg	Thr	Tyr	Ile	Tyr	Ile	Tyr	Ile	Lys	Asn	Ile	Ser
	50					55				60					
Asp	Ser	Cys	Ile	Gln	Met	Ser	Lys	Val	Phe	Val	Ala	Thr	Tyr	Tyr	Ile
65				70				75						80	
Ala	Tyr	Thr	Gln	Asn	His										
				85											

&lt;210&gt; 3341

&lt;211&gt; 1132

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3341

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 agctggaggc accaggtctg aattccagac tcctccccac caccacact tcacctccaa  
 120

ctggagcatg accacagacc cattcagga ggctggcgga ctcttcatcc tggacagtcc  
 180  
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 240  
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 300  
 gctggaccat tcatecttgg tccccgtctg ggcaactcac cggtgccaaag catagtgcag  
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 420  
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 720  
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 780  
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 1080  
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 1132

&lt;210&gt; 3342

&lt;211&gt; 308

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3342

Met	Lys	Arg	Arg	Ala	Ser	Asp	Arg	Gly	Ala	Gly	Glu	Thr	Ser	Ala	Arg
1				5				10						15	
Ala	Lys	Ala	Leu	Gly	Ser	Gly	Ile	Ser	Gly	Asn	Asn	Ala	Lys	Arg	Ala
			20					25						30	
Gly	Pro	Phe	Ile	Leu	Gly	Pro	Arg	Leu	Gly	Asn	Ser	Pro	Val	Pro	Ser
		35					40					45			
Ile	Val	Gln	Cys	Leu	Ala	Arg	Lys	Asp	Gly	Thr	Asp	Asp	Phe	Tyr	Gln
	50					55					60				
Leu	Lys	Ile	Leu	Thr	Leu	Glu	Glu	Arg	Gly	Asp	Gln	Gly	Ile	Glu	Ser
65					70				75					80	
Gln	Glu	Glu	Arg	Gln	Gly	Lys	Met	Leu	Leu	His	Thr	Glu	Tyr	Ser	Leu
			85					90						95	
Leu	Ser	Leu	Leu	His	Thr	Gln	Asp	Gly	Val	Val	His	His	His	Gly	Leu

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<400> 3343
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ttcagcatga actgggtcgt gggcagcgcg gacctggaga ttatcaacgc caccactggg
180
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240
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360
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420
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594
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<210> 3344  
 <211> 143  
 <212> PRT  
 <213> Homo sapiens

<400> 3344  
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 Tyr Arg His Asn Arg Pro Leu Leu Ser Gly Val Ser Asp Thr Glu Ala  
 20 25 30  
 Arg Gln Pro Gly Lys Ser Pro Pro Phe Ser Met Asn Trp Val Val Gly  
 35 40 45  
 Ser Ala Asp Leu Glu Ile Ile Asn Ala Thr Thr Gly Arg Arg Ser Cys  
 50 55 60  
 Gly Gly Pro Ser Arg Leu Cys Lys His Val Leu Ser Ala Arg Trp Ala  
 65 70 75 80  
 Arg Leu Tyr Gly Arg Leu Ser Thr Arg Thr Pro Ser Pro Gly Asp Thr  
 85 90 95  
 Pro Ser Met Tyr Cys Glu Ala Lys Leu Gly Ala His Thr Tyr Gln Ser  
 100 105 110  
 Val Lys Gln Gln Leu Phe Lys Ala Phe Gln Lys Ala Gly Leu Gly Thr  
 115 120 125  
 Trp Val Arg Lys Pro Pro Glu Gln Gln Gln Phe Leu Leu Thr Leu  
 130 135 140

<210> 3345  
 <211> 1149  
 <212> DNA  
 <213> Homo sapiens

<400> 3345  
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 180  
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 240  
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 300  
 gtggtgagcc tggtagctgg ggactcatcc tggccctgcc tggccctcag gtgggatgct  
 360  
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 420  
 cagtctgggc cgagacagca tgagcagggc cctggggagg aggtcccgga cgtcactcct  
 480  
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 540  
 atggatctcg gcctgtctga ggaccacttc tcccgccctg tgggtctgtt cctggcctct  
 600  
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 660

gagcagtcgg agaagcagaa ggatgccgtg gtgcgactca tccacctccg gctgaagctc  
 720  
 caggagctga aggaccccaa tgaggatgag ccaaacatcc gaggctcct tgagcaccgc  
 780  
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 900  
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 1020  
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 1080  
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 1140  
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 1149

<210> 3346

<211> 263

<212> PRT

<213> Homo sapiens

<400> 3346

Met	Glu	Tyr	Asp	Glu	Lys	Leu	Ala	Arg	Phe	Arg	Gln	Ala	His	Leu	Asn
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Pro	Phe	Asn	Lys	Gln	Ser	Gly	Pro	Arg	Gln	His	Glu	Gln	Gly	Pro	Gly
			20					25					30		
Glu	Glu	Val	Pro	Asp	Val	Thr	Pro	Glu	Glu	Ala	Leu	Pro	Glu	Leu	Pro
		35				40					45				
Pro	Gly	Glu	Pro	Glu	Phe	Arg	Cys	Pro	Glu	Arg	Val	Met	Asp	Leu	Gly
	50					55					60				
Leu	Ser	Glu	Asp	His	Phe	Ser	Arg	Pro	Val	Gly	Leu	Phe	Leu	Ala	Ser
65					70					75					80
Asp	Val	Gln	Gln	Leu	Arg	Gln	Ala	Ile	Glu	Glu	Cys	Lys	Gln	Val	Ile
			85					90					95		
Leu	Glu	Leu	Pro	Glu	Gln	Ser	Glu	Lys	Gln	Lys	Asp	Ala	Val	Val	Arg
			100					105					110		
Leu	Ile	His	Leu	Arg	Leu	Lys	Leu	Gln	Glu	Leu	Lys	Asp	Pro	Asn	Glu
		115					120					125			
Asp	Glu	Pro	Asn	Ile	Arg	Val	Leu	Leu	Glu	His	Arg	Phe	Tyr	Lys	Glu
	130					135					140				
Lys	Ser	Lys	Ser	Val	Lys	Gln	Thr	Cys	Asp	Lys	Cys	Asn	Thr	Ile	Ile
145					150					155					160
Trp	Gly	Leu	Ile	Gln	Thr	Trp	Tyr	Thr	Cys	Thr	Gly	Cys	Tyr	Tyr	Arg
			165					170					175		
Cys	His	Ser	Lys	Cys	Leu	Asn	Leu	Ile	Ser	Lys	Pro	Cys	Val	Ser	Ser
			180					185					190		
Lys	Val	Ser	His	Gln	Ala	Glu	Tyr	Glu	Leu	Asn	Ile	Cys	Pro	Glu	Thr
		195					200					205			
Gly	Leu	Asp	Ser	Gln	Asp	Tyr	Arg	Cys	Ala	Glu	Cys	Arg	Ala	Pro	Ile
	210					215					220				
Ser	Leu	Arg	Gly	Val	Pro	Ser	Glu	Ala	Arg	Gln	Cys	Asp	Tyr	Thr	Gly

225		230		235		240
Gln Tyr Tyr Cys Ser His Cys His Trp Asn Asp Leu Ala Val Ile Pro						
		245		250		255
Glu Ala Gly Val Cys Ser Arg						
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<210> 3347  
 <211> 2267  
 <212> DNA  
 <213> Homo sapiens

<400> 3347  
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 180  
 acgcctgcca tgtttgaccg ggccctcaag cccttcttgc agagctgcca cctccgaatg  
 240  
 ctgactgacc cagtggacca gtgtgtggcc taccatctgg gccgtgttgg agagagcctc  
 300  
 ccagagctgc agatagaaat cattgctgac tacgaggtac accccaaccg acgccccaa  
 360  
 atcctggccc agacagcagc ccatgtagct ggggctgctt actactacca acgacaagat  
 420  
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 480  
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 540  
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 <211> 288  
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 <213> Homo sapiens

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 Phe Asp Arg Ala Leu Lys Pro Phe Leu Gln Ser Cys His Leu Arg Met  
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 85 90 95  
 Gly Glu Ser Leu Pro Glu Leu Gln Ile Glu Ile Ile Ala Asp Tyr Glu  
 100 105 110

Val His Pro Asn Arg Arg Pro Lys Ile Leu Ala Gln Thr Ala Ala His  
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 Gly Gly Trp Phe Ala Ile Arg Gly Val Val Leu Leu Pro Gly Ile Glu  
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 Val Pro Asp Leu Pro Pro Arg Lys Pro His Asp Cys Val Pro Thr Arg  
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 Ala Asp Arg Ile Ala Leu Leu Glu Gly Phe Asn Phe His Trp Arg Asp  
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 Pro Phe Thr Thr Pro Ala Pro Lys Lys Pro Gly Asn Pro Ser Arg Ala  
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&lt;210&gt; 3349

&lt;211&gt; 1132

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3349

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 35 40 45  
 Glu Glu Lys Leu Leu Arg Gln Glu Gly Lys Leu Glu Lys Ile Gln Thr  
 50 55 60  
 Lys Ala Gly Glu Ala Thr Val Lys Phe Leu Lys Ser Cys Arg Leu Glu  
 65 70 75 80  
 Val Gly Met Lys Asn Asn Val Lys Trp Glu Leu Asn Pro Glu Ile Val  
 85 90 95  
 Ala Arg His Phe Phe Lys Asn Leu Gly Val Val Val Ala Pro His Thr  
 100 105 110  
 Leu Lys Leu Pro Ala Glu Pro Ile Thr Arg Trp Gly Glu Tyr Trp Cys  
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1422

&lt;210&gt; 3352

&lt;211&gt; 97

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3352

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2537

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 35 40 45  
 Ala Phe Arg Ile Lys Glu Asp Ile Ser Ala Cys Leu Gln Gly Thr His  
 50 55 60  
 Gly Phe Arg Lys Glu Glu Ser Leu Ala Arg Lys Leu Leu Glu Ser His  
 65 70 75 80  
 Ile Gln Thr Ile Thr Ser Ile Val Lys Lys Leu Ser Gln Asn Ile Glu  
 85 90 95  
 Ile Leu Glu Asp Gln Ile Arg Ala Arg Asp Gln Ala Ala Thr Gly Thr  
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<210> 3357  
 <211> 2268  
 <212> DNA  
 <213> Homo sapiens

<400> 3357

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<210> 3358

<211> 493

<212> PRT

<213> Homo sapiens

<400> 3358

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			20						25				30		
Ser	Tyr	Leu	Ser	Met	Glu	Lys	Ile	Ile	Gln	Val	Ala	Lys	Thr	Ser	Ala
		35					40					45			
Ala	Gln	Ala	Ile	His	Pro	Gly	Cys	Gly	Phe	Leu	Ser	Glu	Asn	Met	Glu
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Phe	Ala	Glu	Leu	Cys	Lys	Gln	Glu	Gly	Ile	Ile	Phe	Ile	Gly	Pro	Pro
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Pro	Ser	Ala	Ile	Arg	Asp	Met	Gly	Ile	Lys	Ser	Thr	Ser	Lys	Ser	Ile
				85					90				95		
Met	Ala	Ala	Ala	Gly	Val	Pro	Val	Val	Glu	Gly	Tyr	His	Gly	Glu	Asp
			100					105					110		
Gln	Ser	Asp	Gln	Cys	Leu	Lys	Glu	His	Ala	Arg	Arg	Ile	Gly	Tyr	Pro
		115					120					125			
Val	Met	Ile	Lys	Ala	Val	Arg	Gly	Gly	Gly	Gly	Lys	Gly	Met	Arg	Ile
		130				135						140			
Val	Arg	Ser	Glu	Gln	Glu	Phe	Gln	Glu	Gln	Leu	Glu	Ser	Ala	Arg	Arg
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Glu	Ala	Lys	Lys	Ser	Phe	Asn	Asp	Asp	Ala	Met	Leu	Ile	Glu	Lys	Phe
			165						170				175		
Val	Asp	Thr	Pro	Arg	His	Val	Glu	Val	Gln	Val	Phe	Gly	Asp	His	His
			180						185				190		
Gly	Asn	Ala	Val	Tyr	Leu	Phe	Glu	Arg	Asp	Cys	Ser	Val	Gln	Arg	Arg

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Val Arg Lys Lys Leu Gly Glu Ala Ala Val Arg Ala Ala Lys Ala Val		
225	230	235
Asn Tyr Val Gly Ala Gly Thr Val Glu Phe Ile Met Asp Ser Lys His		
245	250	255
Asn Phe Cys Phe Met Glu Met Asn Thr Arg Leu Gln Val Glu His Pro		
260	265	270
Val Thr Glu Met Ile Thr Gly Thr Asp Leu Val Glu Trp Gln Leu Arg		
275	280	285
Ile Ala Ala Gly Glu Lys Ile Pro Leu Ser Gln Glu Glu Ile Thr Leu		
290	295	300
Gln Gly His Ala Phe Glu Ala Arg Ile Tyr Ala Glu Asp Pro Ser Asn		
305	310	315
Asn Phe Met Pro Val Ala Gly Pro Leu Val His Leu Ser Thr Pro Arg		
325	330	335
Ala Asp Pro Ser Thr Arg Ile Glu Thr Gly Val Arg Gln Gly Asp Glu		
340	345	350
Val Ser Val His Tyr Asp Pro Met Ile Ala Lys Leu Val Val Trp Ala		
355	360	365
Ala Asp Arg Gln Ala Ala Leu Thr Lys Leu Arg Tyr Ser Leu Arg Gln		
370	375	380
Tyr Asn Ile Val Gly Leu His Thr Asn Ile Asp Phe Leu Leu Asn Leu		
385	390	395
Ser Gly His Pro Glu Phe Glu Ala Gly Asn Val His Thr Asp Phe Ile		
405	410	415
Pro Gln His His Lys Gln Leu Leu Leu Ser Arg Lys Ala Ala Ala Lys		
420	425	430
Glu Ser Leu Cys Gln Ala Ala Leu Gly Leu Ile Leu Lys Glu Lys Ala		
435	440	445
Met Thr Asp Thr Phe Thr Leu Gln Ala His Asp Gln Phe Ser Pro Phe		
450	455	460
Ser Ser Ser Ser Gly Arg Arg Leu Asn Ile Ser Tyr Thr Arg Asn Met		
465	470	475
Thr Leu Lys Asp Gly Lys Asn Ser Phe Arg Leu Leu Gly		
485	490	

&lt;210&gt; 3359

&lt;211&gt; 652

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3359

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<211> 149

<212> PRT

<213> Homo sapiens

<400> 3360

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			20					25					30		
Arg	Ile	Leu	Leu	Val	Lys	Tyr	Ser	Ala	Asn	Glu	Glu	Asn	Lys	Tyr	Asp
		35					40					45			
Tyr	Leu	Pro	Thr	Thr	Val	Asn	Val	Cys	Ser	Glu	Leu	Val	Lys	Leu	Val
	50					55					60				
Phe	Cys	Val	Leu	Val	Ser	Phe	Cys	Val	Ile	Lys	Lys	Asp	His	Gln	Ser
65					70					75				80	
Arg	Asn	Leu	Lys	Tyr	Ala	Ser	Trp	Lys	Glu	Phe	Ser	Asp	Phe	Met	Lys
			85					90						95	
Trp	Ser	Ile	Pro	Ala	Phe	Leu	Tyr	Phe	Leu	Asp	Asn	Leu	Ile	Val	Phe
			100					105					110		
Tyr	Val	Leu	Ser	Tyr	Leu	Gln	Pro	Ala	Met	Ala	Val	Ile	Phe	Ser	Asn
		115					120					125			
Phe	Ser	Ile	Ile	Thr	Thr	Ala	Leu	Leu	Phe	Arg	Ile	Val	Leu	Lys	Arg
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Arg	Leu	Asn	Trp	Ile											
145															

<210> 3361

<211> 1040

<212> DNA

<213> Homo sapiens

<400> 3361

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 ggagtcgcct gcgcgcgcag cggaggccag tgcgccggcg catagcgagc ccgggtctgt  
 180  
 gatcgccgag gcgggagtga agatagtcca agtcctaaga gacagcgcct ctctcattca  
 240

gtctttgatt atacatcagc atcaccagct ccctcaccac caatgcgacc atgggagatg  
 300  
 acatcaaata ggcagccccc ttcagttcga ccaagccaac atcacttctc aggggaacga  
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 420  
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 780  
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 840  
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 1040

&lt;210&gt; 3362

&lt;211&gt; 252

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3362

Met	Arg	Pro	Trp	Glu	Met	Thr	Ser	Asn	Arg	Gln	Pro	Pro	Ser	Val	Arg
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Pro	Ser	Gln	His	His	Phe	Ser	Gly	Glu	Arg	Cys	Asn	Thr	Pro	Ala	Arg
			20					25					30		
Asn	Arg	Arg	Ser	Pro	Pro	Val	Arg	Arg	Gln	Arg	Gly	Arg	Arg	Asp	Arg
			35				40					45			
Leu	Ser	Arg	His	Asn	Ser	Ile	Ser	Gln	Asp	Glu	Asn	Tyr	His	His	Leu
	50					55					60				
Pro	Tyr	Ala	Gln	Gln	Gln	Ala	Ile	Glu	Glu	Pro	Arg	Ala	Phe	His	Pro
65					70					75				80	
Pro	Asn	Val	Ser	Pro	Arg	Leu	Leu	His	Pro	Ala	Ala	His	Pro	Pro	Gln
				85					90					95	
Gln	Asn	Ala	Val	Met	Val	Asp	Ile	His	Asp	Gln	Leu	His	Gln	Gly	Thr
			100					105					110		
Val	Pro	Val	Ser	Tyr	Thr	Val	Thr	Thr	Val	Ala	Pro	His	Gly	Ile	Pro
		115					120					125			
Leu	Cys	Thr	Gly	Gln	His	Ile	Pro	Ala	Cys	Ser	Thr	Gln	Gln	Val	Pro
	130					135					140				
Gly	Cys	Ser	Val	Val	Phe	Ser	Gly	Gln	His	Leu	Pro	Val	Cys	Ser	Val



145		150		155		160									
Pro	Pro	Pro	Met	Leu	Gln	Ala	Cys	Ser	Val	Gln	His	Leu	Pro	Val	Pro
		165		170		175									
Tyr	Ala	Ala	Phe	Pro	Pro	Leu	Ile	Ser	Ser	Asp	Pro	Phe	Leu	Ile	His
		180		185		190									
Pro	Pro	His	Leu	Ser	Pro	His	His	Pro	Pro	His	Leu	Pro	Pro	Pro	Gly
		195		200		205									
Gln	Phe	Val	Pro	Phe	Gln	Thr	Gln	Gln	Ser	Arg	Ser	Pro	Leu	Gln	Arg
	210			215		220									
Ile	Glu	Asn	Glu	Val	Glu	Leu	Leu	Gly	Glu	His	Leu	Pro	Gly	Ala	His
225				230		235								240	
Pro	Gln	His	Pro	His	Leu	Leu	Ile	Asn	Ile	Ser	Thr				
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<210> 3363  
 <211> 718  
 <212> DNA  
 <213> Homo sapiens

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 120  
 gtagctcagg agtgtctccg gagccactg gagaagcccc ccaacggcct cctcttcccc  
 180  
 cagcacgggg actatcagta cggccgcaac aacatctaaa cagaccactt ccaatacagc  
 240  
 cggcagagct acccaaactc gtacagtttg aaccgctatg atgtgtagag tccaaaggac  
 300  
 aggaccagac tgttggtgac tccttccccg gccccacag cagtatcaga aacttctgac  
 360  
 aatcagtga tgtacaacc agccgagggg acggtgcata actctccatc agaagccctg  
 420  
 gggttcctgg cccccgtga gccgcaggag gatgcgttgc ctgcagtgca gacggccgtg  
 480  
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 600  
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<210> 3364  
 <211> 163  
 <212> PRT  
 <213> Homo sapiens

<400> 3364  
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		20						25					30				
Pro	Gly	Leu	Leu	Met	Glu	Ser	Tyr	Ala	Pro	Ser	Pro	Arg	Leu	Gly	Cys		
		35					40					45					
Thr	Phe	Thr	Asp	Cys	Gln	Lys	Phe	Leu	Ile	Leu	Leu	Trp	Gly	Pro	Gly		
		50				55					60						
Lys	Glu	Ser	Pro	Thr	Val	Trp	Ser	Cys	Pro	Leu	Asp	Ser	Thr	His	His		
65					70					75				80			
Ser	Gly	Ser	Asn	Cys	Thr	Ser	Leu	Gly	Ser	Ser	Ala	Gly	Cys	Ile	Gly		
			85					90					95				
Ser	Gly	Leu	Phe	Arg	Cys	Cys	Cys	Gly	Arg	Thr	Asp	Ser	Pro	Arg	Ala		
			100					105					110				
Gly	Gly	Arg	Gly	Gly	Arg	Trp	Gly	Ala	Ser	Pro	Val	Gly	Ser	Gly	Asp		
		115					120					125					
Thr	Pro	Glu	Leu	Leu	Gly	Arg	Gln	Cys	His	Pro	Lys	Asn	His	Gly	His		
		130				135					140						
Asp	Gly	Val	Pro	Asp	His	Ala	Gly	Gln	Pro	Ile	Pro	His	His	Gln	Arg		
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Ser	Trp	Ala															

&lt;210&gt; 3365

&lt;211&gt; 2389

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3365

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180  
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240  
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300  
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360  
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420  
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480  
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540  
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720  
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780  
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840

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900  
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2100  
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2160  
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2389

&lt;210&gt; 3366

&lt;211&gt; 624

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3366

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Glu Thr Glu Ser Gly Pro Pro Val Glu Arg Cys Gly Val Leu Ser Lys
          20           25           30
Trp Thr Asn Tyr Ile His Gly Trp Gln Asp Arg Trp Val Val Leu Lys
          35           40           45
Asn Asn Ala Leu Ser Tyr Tyr Lys Ser Glu Asp Glu Thr Glu Tyr Gly
          50           55           60
Cys Arg Gly Ser Ile Cys Leu Ser Lys Ala Val Ile Thr Pro His Asp
65           70           75           80
Phe Asp Glu Cys Arg Phe Asp Ile Ser Val Asn Asp Ser Val Trp Tyr
          85           90           95
Leu Arg Ala Gln Asp Pro Asp His Arg Gln Gln Trp Ile Asp Ala Ile
          100          105          110
Glu Gln His Lys Thr Glu Ser Gly Tyr Gly Ser Glu Ser Ser Leu Arg
          115          120          125
Arg His Gly Ser Met Val Ser Leu Val Ser Gly Ala Ser Gly Tyr Ser
          130          135          140
Ala Thr Ser Thr Ser Ser Phe Lys Lys Gly His Ser Leu Arg Glu Lys
145          150          155          160
Leu Ala Glu Met Glu Thr Phe Arg Asp Ile Leu Cys Arg Gln Val Asp
          165          170          175
Thr Leu Gln Lys Tyr Phe Asp Ala Cys Ala Asp Ala Val Ser Lys Asp
          180          185          190
Glu Leu Gln Arg Asp Lys Val Val Glu Asp Asp Glu Asp Asp Phe Pro
          195          200          205
Thr Thr Arg Ser Asp Gly Asp Phe Leu His Ser Thr Asn Gly Asn Lys
          210          215          220
Glu Lys Leu Phe Pro His Val Thr Pro Lys Gly Ile Asn Gly Ile Asp
225          230          235          240
Phe Lys Gly Glu Ala Ile Thr Phe Lys Ala Thr Thr Ala Gly Ile Leu
          245          250          255
Ala Thr Leu Ser His Cys Ile Glu Leu Met Val Lys Arg Glu Asp Ser
          260          265          270
Trp Gln Lys Arg Leu Asp Lys Glu Thr Glu Lys Lys Arg Arg Thr Glu
          275          280          285
Glu Ala Tyr Lys Asn Ala Met Thr Glu Leu Lys Lys Lys Ser His Phe
          290          295          300
Gly Gly Pro Asp Tyr Glu Glu Gly Pro Asn Ser Leu Ile Asn Glu Glu
305          310          315          320
Glu Phe Phe Asp Ala Val Glu Ala Ala Leu Asp Arg Gln Asp Lys Ile
          325          330          335
Glu Glu Gln Ser Gln Ser Glu Lys Val Arg Leu His Trp Pro Thr Ser
          340          345          350
Leu Pro Ser Gly Asp Ala Phe Ser Ser Val Gly Thr His Arg Phe Val
          355          360          365
Gln Lys Pro Tyr Ser Arg Ser Ser Ser Met Ser Ser Ile Asp Leu Val
          370          375          380
Ser Ala Ser Asp Asp Val His Arg Phe Ser Ser Gln Val Glu Glu Met

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385		390		395		400									
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				405					410					415	
Asn	Trp	Gln	Leu	Val	Val	Glu	Glu	Gly	Glu	Met	Lys	Val	Tyr	Arg	Arg
		420						425					430		
Glu	Val	Glu	Glu	Asn	Gly	Ile	Val	Leu	Asp	Pro	Leu	Lys	Ala	Thr	His
	435						440				445				
Ala	Val	Lys	Gly	Val	Thr	Gly	His	Glu	Val	Cys	Asn	Tyr	Phe	Trp	Asn
	450					455					460				
Val	Asp	Val	Arg	Asn	Asp	Trp	Glu	Thr	Thr	Ile	Glu	Asn	Phe	His	Val
465					470				475					480	
Val	Glu	Thr	Leu	Ala	Asp	Asn	Ala	Ile	Ile	Ile	Tyr	Gln	Thr	His	Lys
		485						490					495		
Arg	Val	Trp	Pro	Ala	Ser	Gln	Arg	Asp	Val	Leu	Tyr	Leu	Ser	Val	Ile
		500						505				510			
Arg	Lys	Ile	Pro	Ala	Leu	Thr	Glu	Asn	Asp	Pro	Glu	Thr	Trp	Ile	Val
	515						520				525				
Cys	Asn	Phe	Ser	Val	Asp	His	Asp	Ser	Ala	Pro	Leu	Asn	Asn	Arg	Cys
	530				535				540						
Val	Arg	Ala	Lys	Ile	Asn	Val	Ala	Met	Ile	Cys	Gln	Thr	Leu	Val	Ser
545					550				555					560	
Pro	Pro	Glu	Gly	Asn	Gln	Glu	Ile	Ser	Arg	Asp	Asn	Ile	Leu	Cys	Lys
		565						570				575			
Ile	Thr	Tyr	Val	Ala	Asn	Val	Asn	Pro	Gly	Gly	Trp	Ala	Pro	Ala	Ser
	580						585					590			
Val	Leu	Arg	Ala	Val	Ala	Lys	Arg	Glu	Tyr	Pro	Lys	Phe	Leu	Lys	Arg
	595						600				605				
Phe	Thr	Ser	Tyr	Val	Gln	Glu	Lys	Thr	Ala	Gly	Lys	Pro	Ile	Leu	Phe
610					615				620						

&lt;210&gt; 3367

&lt;211&gt; 366

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3367

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gagaattacg ccacagaggt gttggaggct ggcacgtgg catctcagga gcacggaggg  
120

tgccttcccc acttcaggcc tcttagtgtc aaggatgtga gaggcaaggg ctgctgggag  
180

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240

gaggtgctgg gagccccaca actcagggcc ccccgacgcc cagtaaggcc actgtacacc  
300

cctcctgacc cagaccataa ccagcctccg attgtgcttt tgaccctgtt tccttcaggc  
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accagg

366

&lt;210&gt; 3368

&lt;211&gt; 104

&lt;212&gt; PRT

<213> Homo sapiens

<400> 3368

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          20           25           30
Lys Asp Val Arg Gly Lys Gly Cys Trp Glu Ser Ile Leu Arg Thr Glu
          35           40           45
Gly Gly Val Pro Pro Ala Leu Pro Ser Tyr Trp Trp Arg Lys Glu Val
          50           55           60
Leu Gly Ala Pro Gln Leu Arg Ala Pro Arg Arg Pro Val Arg Pro Leu
65           70           75           80
Tyr Thr Pro Pro Asp Pro Asp His Asn Gln Pro Pro Ile Val Leu Leu
          85           90           95
Thr Leu Phe Pro Ser Gly Thr Arg
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<210> 3369

<211> 1405

<212> DNA

<213> Homo sapiens

<400> 3369

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120
aaggttttat ataatgccaa taaaaatgat gattatgaca acgaggagat cttaacctat
180
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720
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780
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840
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900

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 1080  
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 1260  
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 1380  
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 1405

<210> 3370

<211> 269

<212> PRT

<213> Homo sapiens

<400> 3370

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			20					25					30		
Lys	Lys	Asn	Lys	Lys	Lys	Arg	Lys	Lys	Val	Leu	Tyr	Asn	Ala	Asn	Lys
		35					40					45			
Asn	Asp	Asp	Tyr	Asp	Asn	Glu	Glu	Ile	Leu	Thr	Tyr	Glu	Glu	Met	Ser
	50					55					60				
Leu	Tyr	His	Gln	Pro	Ala	Asn	Arg	Lys	Arg	Pro	Ile	Ile	Leu	Ile	Gly
65				70				75						80	
Pro	Gln	Asn	Cys	Gly	Gln	Asn	Glu	Leu	Arg	Gln	Arg	Leu	Met	Asn	Lys
			85					90						95	
Glu	Lys	Asp	Arg	Phe	Ala	Ser	Ala	Val	Pro	His	Thr	Thr	Arg	Ser	Arg
		100						105					110		
Arg	Asp	Gln	Glu	Val	Ala	Gly	Arg	Asp	Tyr	His	Phe	Val	Ser	Arg	Gln
		115					120					125			
Ala	Phe	Glu	Ala	Asp	Ile	Ala	Ala	Gly	Lys	Phe	Ile	Glu	His	Gly	Glu
		130				135					140				
Phe	Glu	Lys	Asn	Leu	Tyr	Gly	Thr	Ser	Ile	Asp	Ser	Val	Arg	Gln	Val
145				150				155						160	
Ile	Asn	Ser	Gly	Lys	Ile	Cys	Leu	Leu	Ser	Leu	Arg	Thr	Gln	Ser	Leu
			165					170						175	
Lys	Thr	Leu	Arg	Asn	Ser	Asp	Leu	Lys	Pro	Tyr	Ile	Ile	Phe	Ile	Ala
		180						185					190		
Pro	Pro	Ser	Gln	Glu	Arg	Leu	Arg	Ala	Leu	Leu	Ala	Lys	Glu	Gly	Lys
		195					200					205			
Asn	Pro	Lys	Pro	Glu	Glu	Leu	Arg	Glu	Ile	Ile	Glu	Lys	Thr	Arg	Glu
	210					215					220				
Met	Glu	Gln	Asn	Asn	Gly	His	Tyr	Phe	Asp	Thr	Ala	Ile	Val	Asn	Ser



225		230		235		240									
Asp	Leu	Asp	Lys	Ala	Tyr	Gln	Glu	Leu	Leu	Arg	Leu	Ile	Asn	Lys	Leu
		245					250							255	
Asp	Thr	Glu	Pro	Gln	Trp	Val	Pro	Ser	Thr	Trp	Leu	Arg			
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<210> 3371  
 <211> 790  
 <212> DNA  
 <213> Homo sapiens

<400> 3371  
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 120  
 ggtttcaaaa gtccggtggc ctggggctgt atgggtccac cccctggggg ggttgaggaa  
 180  
 gttgctgtcg tctgaggtac tgccgtacgt gtagtcctgg tccccgcttt tgccctggcc  
 240  
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 300  
 cgattccgac aagagacggg gcacccttca ttgcaaagag atttccccag atcctttctc  
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 420  
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 480  
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 540  
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 600  
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 660  
 acttttgaaa ccaaagatca gccagaatat gattccacag atggcgaggg tgactggagt  
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 790

<210> 3372  
 <211> 198  
 <212> PRT  
 <213> Homo sapiens

<400> 3372  
 Gly Thr Ala Val Arg Val Val Leu Val Pro Ala Phe Ala Leu Ala Lys  
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 Glu Ala Pro Arg Glu His Leu Asp His Gln Ala Ala His Gln Pro Phe  
 20 25 30  
 Pro Arg Pro Arg Phe Arg Gln Glu Thr Gly His Pro Ser Leu Gln Arg  
 35 40 45  
 Asp Phe Pro Arg Ser Phe Leu Leu Asp Leu Pro Asn Phe Pro Asp Leu

50	55	60
Ser Lys Ala Asp Ile Asn Gly Gln Asn Pro Asn Ile Gln Val Thr Ile		
65	70	75
Glu Val Val Asp Gly Pro Asp Ser Glu Ala Asp Lys Asp Gln His Pro		80
	85	90
Glu Asn Lys Pro Ser Trp Ser Val Pro Ser Pro Asp Trp Arg Ala Trp		95
	100	105
Trp Gln Arg Ser Leu Ser Leu Ala Arg Ala Asn Ser Gly Asp Gln Asp		110
	115	120
Tyr Lys Tyr Asp Ser Thr Ser Asp Asp Ser Asn Phe Leu Asn Pro Pro		125
	130	135
Arg Gly Trp Asp His Thr Ala Pro Gly His Arg Thr Phe Glu Thr Lys		140
145	150	155
Asp Gln Pro Glu Tyr Asp Ser Thr Asp Gly Glu Gly Asp Trp Ser Leu		160
	165	170
Trp Ser Val Cys Ser Val Thr Cys Gly Asn Gly Asn Gln Lys Arg Thr		175
	180	185
Arg Ser Cys Gly Tyr Ala		190
195		

&lt;210&gt; 3373

&lt;211&gt; 726

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3373

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 120  
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 180  
 tcagtgcgtc acgtagtcag ggctcaggct ggggcccggc tccagagcct ggtcacattc  
 240  
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 300  
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 420  
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 600  
 gtcttgggat cctgcagggg gagggggctg tgaatgtgcg ggttgtgtgt agacgtggtg  
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 atgcat  
 726

&lt;210&gt; 3374

<211> 84  
 <212> PRT  
 <213> Homo sapiens

<400> 3374  
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 Phe His His Gln His Val Leu Ile Ser Arg Phe Leu Cys Leu Lys Asn  
 20 25 30  
 Lys Ser Ser Ala Ser Val Val Phe Thr Thr Tyr Thr Gln Lys His Pro  
 35 40 45  
 Ser Ile Glu Asp Gly Pro Pro Phe Val Glu Pro Leu Leu Asn Phe Ile  
 50 55 60  
 Trp Phe Leu Leu Leu Ala Val Asp Gly Cys Val Leu Gly Ser Cys Arg  
 65 70 75 80  
 Gly Arg Gly Leu

<210> 3375  
 <211> 393  
 <212> DNA  
 <213> Homo sapiens

<400> 3375  
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 120  
 agccacctgc ctgggctttg ggggcccagc cggcatgggg agccccaggc tccagctggc  
 180  
 ctcgcttggc tctgaaatct aggccaggat gcagagcccg cagtgcggcc agtggagccc  
 240  
 ctggtactgt ggcagcccc cacctggcag ccccttttcc tgtcaaagcc cctcccagcg  
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 393

<210> 3376  
 <211> 103  
 <212> PRT  
 <213> Homo sapiens

<400> 3376  
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 Ala His Thr Leu Ser Thr His Thr Pro Ser Cys Arg Leu Ser Pro Thr  
 20 25 30  
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 35 40 45  
 Pro Gly Ser Ser Trp Pro Arg Leu Ala Leu Lys Ser Arg Pro Gly Cys  
 50 55 60  
 Arg Ala Arg Ser Ala Ala Ser Gly Ala Pro Gly Thr Val Arg Ser Pro

65                                      70                                      75                                      80  
 His Leu Ala Ala Pro Phe Pro Val Lys Ala Pro Pro Ser Val Leu Ser  
    85                                      90                                      95  
 Pro Pro Gly Lys Leu Pro Ala  
    100

<210> 3377

<211> 5235

<212> DNA

<213> Homo sapiens

<400> 3377

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 120  
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 180  
 accaccact caaggaccat ctcttcacg accatccaca cgagactcag attgtctgaa  
 240  
 ttgagctatc gcaacttaat gctaaaagct ccttaaagct acagatttat gacatagttc  
 300  
 cttccaaaat attacatcat aaatcattga gaagattaaa aaaaaacact tgaagaaatt  
 360  
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 420  
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 660  
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 900  
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 960  
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 1080  
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 1140  
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 1260

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1920  
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 5220  
 tctgacttgg gcagc  
 5235

&lt;210&gt; 3378

&lt;211&gt; 970

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3378

Met	Leu	Cys	Phe	Leu	Asp	Asp	Gly	Ala	Gly	Met	Asp	Pro	Ser	Asp	Ala
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Ala	Ser	Val	Ile	Gln	Phe	Gly	Lys	Ser	Ala	Lys	Arg	Thr	Pro	Glu	Ser
			20					25					30		
Thr	Gln	Ile	Gly	Gln	Tyr	Gly	Asn	Gly	Leu	Lys	Ser	Gly	Ser	Met	Arg
	35						40					45			
Ile	Gly	Lys	Asp	Phe	Ile	Leu	Phe	Thr	Lys	Lys	Glu	Asp	Thr	Met	Thr
	50					55					60				
Cys	Leu	Phe	Leu	Ser	Arg	Thr	Phe	His	Glu	Glu	Glu	Gly	Ile	Asp	Glu
65					70					75				80	
Val	Ile	Val	Pro	Leu	Pro	Thr	Trp	Asn	Ala	Arg	Thr	Arg	Glu	Pro	Val
			85						90					95	
Thr	Asp	Asn	Val	Glu	Lys	Phe	Ala	Ile	Glu	Thr	Glu	Leu	Ile	Tyr	Lys
			100					105					110		
Tyr	Ser	Pro	Phe	Arg	Thr	Glu	Glu	Glu	Val	Met	Thr	Gln	Phe	Met	Lys
		115					120					125			
Ile	Pro	Gly	Asp	Ser	Gly	Thr	Leu	Val	Ile	Ile	Phe	Asn	Leu	Lys	Leu
	130					135						140			
Met	Asp	Asn	Gly	Glu	Pro	Glu	Leu	Asp	Ile	Ile	Ser	Asn	Pro	Arg	Asp
145					150					155				160	
Ile	Gln	Met	Ala	Glu	Thr	Ser	Pro	Glu	Gly	Thr	Lys	Pro	Glu	Arg	Arg



2558

595	600	605
Pro Glu Ala Pro Arg Lys	Pro Ala Asn Thr Leu Val	Lys Thr Ala Ser
610	615	620
Arg Pro Ala Pro Leu Val Gln	Gln Leu Ser Pro Ser Leu Leu	Pro Asn
625	630	635
Ser Lys Ser Pro Arg Glu Val	Pro Ser Pro Lys Val Ile Lys	Thr Pro
645	650	655
Val Val Lys Lys Thr Glu Ser	Pro Ile Lys Leu Ser Pro Ala	Thr Pro
660	665	670
Ser Arg Lys Arg Ser Val Ala	Val Ser Asp Glu Glu Glu	Val Glu Glu
675	680	685
Glu Ala Glu Arg Arg Lys Glu	Arg Cys Lys Arg Gly Arg	Phe Val Val
690	695	700
Lys Glu Glu Lys Lys Asp Ser	Asn Glu Leu Ser Asp Ser	Ala Gly Gly
705	710	715
Glu Asp Ser Ala Asp Leu Lys	Arg Ala Gln Lys Asp Lys	Gly Leu His
725	730	735
Val Glu Val Arg Val Asn Arg	Glu Trp Tyr Thr Gly Arg	Val Thr Ala
740	745	750
Val Glu Val Gly Lys His Val	Val Arg Trp Lys Val Lys	Phe Asp Tyr
755	760	765
Val Pro Thr Asp Thr Thr Pro	Arg Asp Arg Trp Val Glu	Lys Gly Ser
770	775	780
Glu Asp Val Arg Leu Met Lys	Pro Pro Ser Pro Glu His	Gln Ser Leu
785	790	795
Asp Thr Gln Gln Glu Gly Gly	Glu Glu Glu Val Gly Pro	Val Ala Gln
805	810	815
Gln Ala Ile Ala Val Ala Glu	Pro Ser Thr Ser Glu Cys	Leu Arg Ile
820	825	830
Glu Pro Asp Thr Thr Ala Leu	Ser Thr Asn His Glu Thr	Ile Asp Leu
835	840	845
Leu Val Gln Ile Leu Arg Asn	Cys Leu Arg Tyr Phe Leu	Pro Pro Ser
850	855	860
Phe Pro Ile Ser Lys Lys Gln	Leu Ser Ala Met Asn Ser	Asp Glu Leu
865	870	875
Ile Ser Phe Pro Leu Lys Glu	Tyr Phe Lys Gln Tyr Glu	Val Gly Leu
885	890	895
Gln Asn Leu Cys Asn Ser Tyr	Gln Ser Arg Ala Asp Ser	Arg Ala Lys
900	905	910
Ala Ser Glu Glu Ser Leu Arg	Thr Ser Glu Arg Lys Leu	Arg Glu Thr
915	920	925
Glu Glu Lys Leu Gln Lys Leu	Arg Thr Asn Ile Val Ala	Leu Leu Gln
930	935	940
Lys Val Gln Glu Asp Ile Asp	Ile Asn Thr Asp Asp Glu	Leu Asp Ala
945	950	955
Tyr Ile Glu Asp Leu Ile Thr	Lys Gly Asp	
965	970	

&lt;210&gt; 3379

&lt;211&gt; 898

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3379

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 cccaaccct gggagctccg agtgtcagaa gatgcgttat tgggctcaga gattgcacag  
 180  
 gtaacaggga atgatgtgga ctcaggaccc gtgctgtggt atgtgctaag cccatctggg  
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 420  
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 660  
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 780  
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 840  
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 898

&lt;210&gt; 3380

&lt;211&gt; 299

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3380

Xaa	Ile	Trp	Ala	Glu	Thr	Arg	Leu	Val	Leu	Met	Ala	Thr	Asp	Arg	Gly
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Ser	Pro	Ala	Leu	Val	Gly	Ser	Ala	Thr	Leu	Thr	Val	Met	Val	Ile	Asp
			20					25					30		
Thr	Asn	Gly	Asn	Arg	Pro	Thr	Ile	Pro	Gln	Pro	Trp	Glu	Leu	Arg	Val
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Ser	Glu	Asp	Ala	Leu	Leu	Gly	Ser	Glu	Ile	Ala	Gln	Val	Thr	Gly	Asn
	50					55					60				
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65					70					75				80	
Pro	Gln	Asp	Pro	Phe	Ser	Val	Gly	Arg	Tyr	Gly	Gly	Arg	Val	Ser	Leu
			85						90					95	
Thr	Gly	Pro	Leu	Asp	Phe	Glu	Gln	Cys	Asp	Arg	Tyr	Gln	Leu	Gln	Leu
		100						105					110		
Leu	Ala	His	Asp	Gly	Pro	His	Glu	Gly	Arg	Ala	Xaa	Leu	Thr	Val	Leu
		115					120					125			
Val	Glu	Asp	Val	Asn	Asp	Asn	Ala	Pro	Ala	Phe	Ser	Gln	Ser	Leu	Tyr

130		135		140
Gln Val Met Leu Leu Glu His Thr Pro Pro Gly Ser Ala Ile Leu Ser				
145		150		155
Val Ser Ala Thr Asp Arg Asp Ser Gly Ala Asn Gly His Ile Ser Tyr				160
	165		170	175
His Leu Ala Ser Pro Ala Asp Gly Phe Ser Val Asp Pro Asn Asn Gly				
	180		185	190
Thr Leu Phe Thr Ile Val Gly Thr Leu Ala Leu Gly His Asp Gly Ser				
	195		200	205
Gly Ala Val Asp Val Val Leu Glu Ala Arg Asp His Gly Ala Pro Val				
	210		215	220
Arg Ala Ala Arg Ala Thr Val Asn Val Gln Leu Arg Asp Gln Asn Asp				
225		230		235
His Ala Pro Ser Phe Thr Leu Phe His Tyr Arg Val Ala Val Thr Glu				240
	245		250	255
Asp Leu Pro Pro Gly Ser Thr Leu Leu Thr Leu Glu Ala Thr Asp Ala				
	260		265	270
Asp Gly Ser Arg Ser His Ala Ala Val Asp Tyr Ser Ile Ile Ser Gly				
	275		280	285
Asn Trp Gly Arg Val Phe Gln Leu Glu Pro Arg				
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&lt;210&gt; 3381

&lt;211&gt; 1379

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3381

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&lt;210&gt; 3382

&lt;211&gt; 279

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3382

Xaa	Pro	Leu	Val	Ser	Val	Asn	Met	Glu	Ala	Glu	Glu	Ser	Glu	Lys	Ala
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Ala	Thr	Glu	Gln	Glu	Pro	Leu	Glu	Gly	Thr	Glu	Gln	Thr	Leu	Asp	Ala
			20					25					30		
Glu	Glu	Glu	Gln	Glu	Glu	Ser	Glu	Glu	Ala	Ala	Cys	Gly	Ser	Lys	Lys
		35					40					45			
Arg	Val	Val	Pro	Gly	Ile	Val	Tyr	Leu	Gly	His	Ile	Pro	Pro	Arg	Phe
	50					55					60				
Arg	Pro	Leu	His	Val	Arg	Asn	Leu	Leu	Ser	Ala	Tyr	Gly	Glu	Val	Gly
65					70					75					80
Arg	Val	Phe	Phe	Gln	Ala	Glu	Asp	Arg	Phe	Val	Arg	Arg	Lys	Lys	Lys
			85						90					95	
Ala	Ala	Ala	Ala	Ala	Gly	Gly	Lys	Lys	Arg	Ser	Tyr	Thr	Lys	Asp	Tyr
			100					105					110		
Thr	Glu	Gly	Trp	Val	Glu	Phe	Arg	Asp	Lys	Arg	Ile	Ala	Lys	Arg	Val
		115					120					125			
Ala	Ala	Ser	Leu	His	Asn	Thr	Pro	Met	Gly	Ala	Arg	Arg	Arg	Ser	Pro
		130				135				140					
Phe	Arg	Tyr	Asp	Leu	Trp	Asn	Leu	Lys	Tyr	Leu	His	Arg	Phe	Thr	Trp
145					150					155					160
Ser	His	Leu	Ser	Glu	His	Leu	Ala	Phe	Glu	Arg	Gln	Val	Arg	Arg	Gln
			165						170				175		
Arg	Leu	Arg	Ala	Glu	Val	Ala	Gln	Ala	Lys	Arg	Glu	Thr	Asp	Phe	Tyr
		180						185					190		
Leu	Gln	Ser	Val	Glu	Arg	Gly	Gln	Arg	Phe	Leu	Ala	Ala	Asp	Gly	Asp
		195					200					205			
Pro	Ala	Arg	Pro	Asp	Gly	Ser	Trp	Thr	Phe	Ala	Gln	Arg	Pro	Thr	Glu

210		215		220
Gln Glu Leu Arg Ala Arg Lys Ala Ala Arg Pro Gly Gly Arg Glu Arg				
225		230		240
Ala Arg Leu Ala Thr Ala Gln Asp Lys Ala Arg Ser Asn Lys Gly Leu				
	245		250	255
Leu Ala Arg Ile Phe Gly Ala Pro Pro Pro Ser Glu Ser Met Glu Gly				
	260		265	270
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<210> 3383  
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 <212> DNA  
 <213> Homo sapiens

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<210> 3384  
 <211> 94  
 <212> PRT  
 <213> Homo sapiens

<400> 3384
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20 25 30
Asn Ala His Phe Leu Thr Ser Phe Val Leu Glu His Arg Ile Thr Ala
35 40 45
Asn Ala His Pro Trp Glu Leu Ser Cys Pro Arg Ser Pro Thr Gln Thr
50 55 60
Leu Gln His Glu Arg Ala Arg Leu Asn Leu Lys Lys Lys Lys Phe Arg
65 70 75 80
Ala Pro Glu Gln Glu Leu Val Ser Ile Ile Asn Ser Glu Ser
85 90

<210> 3385  
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 <212> DNA  
 <213> Homo sapiens

<400> 3385

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 720

&lt;210&gt; 3386

&lt;211&gt; 188

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3386

Met	Val	Val	Lys	Thr	Val	Thr	Val	Arg	Gly	Trp	Gly	Ala	Leu	Arg	Ser
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Thr	Ser	Ser	Ala	Pro	His	Tyr	Pro	Gly	Ser	Phe	Arg	Val	Gly	Pro	Arg
			20					25					30		
Gln	Pro	Pro	Ala	Ser	Ala	Thr	Thr	Pro	Val	Pro	Leu	Ala	Arg	Phe	Phe
		35				40					45				
Val	Asn	Phe	Pro	Ser	Ala	Lys	Gln	Tyr	Phe	Ser	Gln	Phe	Lys	His	Met
	50					55					60				
Glu	Asp	Pro	Leu	Glu	Met	Glu	Arg	Ser	Pro	Gln	Leu	Arg	Lys	His	Ala
65				70					75					80	
Cys	Arg	Val	Met	Gly	Ala	Leu	Asn	Thr	Val	Val	Glu	Asn	Leu	His	Asp
			85					90					95		
Pro	Asp	Lys	Val	Ser	Ser	Val	Leu	Ala	Leu	Val	Gly	Lys	Ala	His	Ala
			100					105					110		
Leu	Lys	His	Lys	Val	Glu	Pro	Val	Tyr	Phe	Lys	Ile	Leu	Ser	Gly	Val
		115				120						125			
Ile	Leu	Glu	Val	Val	Ala	Glu	Glu	Phe	Ala	Ser	Asp	Phe	Pro	Pro	Glu
	130				135					140					
Thr	Gln	Arg	Ala	Trp	Ala	Lys	Leu	Arg	Gly	Leu	Ile	Tyr	Ser	His	Val
145				150					155					160	
Thr	Ala	Ala	Tyr	Lys	Glu	Val	Gly	Trp	Val	Gln	Gln	Val	Pro	Asn	Ala
			165					170					175		
Thr	Thr	Pro	Pro	Ala	Thr	Leu	Pro	Ser	Ser	Gly	Pro				



180

185

&lt;210&gt; 3387

&lt;211&gt; 3299

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3387

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<211> 153

<212> PRT

<213> Homo sapiens

<400> 3388

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			20					25					30		
Leu	Arg	Val	Val	Leu	Ala	Leu	Arg	Gly	Arg	Glu	Glu	Val	Ser	Asp	Ala
		35					40					45			
Gly	Cys	Gly	Gly	Pro	Arg	Ile	Thr	Ile	Asn	Lys	Asp	Thr	Lys	Val	Pro
	50					55					60				
Asn	Ala	Cys	Leu	Phe	Thr	Ile	Asn	Lys	Glu	Asp	His	Thr	Leu	Gly	Asn
65					70					75				80	
Ile	Ile	Lys	Ser	Gln	Leu	Leu	Lys	Asp	Pro	Gln	Val	Leu	Phe	Ala	Gly
			85					90						95	
Tyr	Lys	Val	Pro	His	Pro	Leu	Glu	His	Lys	Ile	Ile	Ile	Arg	Val	Gln
			100					105					110		
Thr	Thr	Pro	Asp	Tyr	Ser	Pro	Gln	Glu	Ala	Phe	Thr	Asn	Ala	Ile	Thr
		115					120					125			
Asp	Leu	Ile	Ser	Glu	Leu	Ser	Leu	Leu	Glu	Glu	Arg	Phe	Arg	Val	Ala
	130					135					140				
Ile	Lys	Asp	Lys	Gln	Glu	Gly	Ile	Glu							
145					150										

<210> 3389

<211> 308

<212> DNA

<213> Homo sapiens

<400> 3389

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<210> 3390  
<211> 102  
<212> PRT  
<213> Homo sapiens

<400> 3390  
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Thr Gln Lys His Pro Ser Ile Glu Asp Gly Pro Pro Phe Val Glu Pro  
35 40 45  
Leu Leu Asn Phe Ile Trp Phe Leu Leu Leu Ala Val Asp Gly Glu Pro  
50 55 60  
Ser Asp Gln Pro His Gly Leu Leu Arg Ala Gly Gly Trp Gly Gly Glu  
65 70 75 80  
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Val Glu Thr Pro Arg Ser  
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<210> 3391  
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<212> DNA  
<213> Homo sapiens

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<210> 3392

<211> 355

<212> PRT

<213> Homo sapiens

<400> 3392

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Phe	Gly	Val	Ile	Ala	Asp	Val	Gln	Phe	Ala	Asp	Leu	Glu	Asp	Gly	Phe
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Asn	Phe	Gln	Gly	Thr	Arg	Arg	Arg	Tyr	Tyr	Arg	His	Ser	Leu	Leu	His
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Leu	Gln	Gly	Ala	Ile	Glu	Asp	Trp	Asn	Asn	Glu	Ser	Ser	Met	Pro	Cys
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Asn	Ala	Ser	Lys	Lys	Ser	Leu	Glu	Leu	Val	Met	Asp	Met	Phe	Lys	Arg
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Asp	Ala	Tyr	Asp	Leu	Ser	Val	Leu	Gly	Val	Asp	Gln	Ser	Ser	Pro	Lys
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Tyr	Glu	Gln	Cys	Met	Lys	Ile	Leu	Arg	Glu	His	Asn	Pro	Asn	Thr	Glu
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Leu	Asn	Ser	Pro	Gln	Gly	Leu	Ser	Glu	Pro	Gln	Phe	Val	Gln	Phe	Asn

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Gly Gly Phe Ser Gln Glu Gln Leu Asn Trp Leu Asn Glu Val Leu Thr		
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Phe Ser Asp Thr Asn Gln Glu Lys Val Val Ile Val Ser His Leu Pro		240
	245	250
Ile Tyr Pro Asp Ala Ser Asp Asn Val Cys Leu Ala Trp Asn Tyr Arg		255
	260	265
Asp Ala Leu Ala Val Ile Trp Ser His Glu Cys Val Val Cys Phe Phe		270
	275	280
Ala Gly His Thr His Asp Gly Gly Tyr Ser Glu Asp Pro Phe Gly Val		285
	290	295
Tyr His Val Asn Leu Glu Gly Val Ile Glu Thr Ala Pro Asp Ser Gln		300
305	310	315
Ala Phe Gly Thr Val His Val Tyr Pro Asp Lys Met Met Leu Lys Gly		320
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 <212> DNA  
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 420  
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 Glu Tyr Gln Ser Thr Ser Ala Ser Ala Ser Ala Ser Pro Phe Gln Ser  
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 Ala Trp Tyr Ser Glu Ser Glu Ile Thr Gln Gly Ala Arg Ser Arg Ser  
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 Gln Asn Gln Gln Arg Asp His Asp Ser Lys Arg Pro Lys Leu Ser Cys  
 85 90 95  
 Thr Asn Cys Thr Thr Ser Ala Gly Arg Asn Val Gly Asn Gly Leu Asn  
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 Ala Ser Ala Ile Pro Ser Trp Leu Leu Asn Asp Pro Gly Val Glu Xaa  
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 Glu Val Met Gly Asp Ala Val Leu Glu Ala Ser His Asn Val Gln Gly  
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 Cys Gly Cys Ser Trp Val Ser His Ser Gly Arg Gly Val Gly Pro Glu  
 85 90 95  
 Ala Glu Gly Ala Gly Ser Pro Gln Ser Leu Gly His Gly Ser Gly Gly  
 100 105 110  
 Trp Ala Ala Arg Arg Cys His Cys Leu Ser Val Ala Gly Val Ala Ala  
 115 120 125  
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&lt;210&gt; 3400

&lt;211&gt; 1069

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3400

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		290		295		300									
Gly	Glu	Asp	Arg	Asn	Leu	Leu	Tyr	Tyr	Ser	Lys	Leu	Gly	Leu	Val	Ile
305				310		315									320
Pro	Ser	Ser	Gly	Ser	Gly	Ser	Gly	Asn	Gln	Ser	Ile	Asp	Arg	Ser	Gly
		325		330		335									
Pro	Leu	Val	Lys	Ser	Leu	Leu	Arg	Arg	Ser	Leu	Ser	Met	Asp	Ser	Gln
		340		345		350									
Val	Pro	Val	Tyr	Ser	Pro	Ser	Ile	Asp	Leu	Lys	Ser	Ser	Gln	Gly	Ser
		355		360		365									
Ser	Ser	Val	Ser	Ser	Asp	Ala	Pro	Gly	Asn	Val	Leu	Cys	Ala	Leu	Ser
		370		375		380									
Gln	Lys	Ser	Ser	Leu	Lys	Asp	Cys	Ser	Glu	Lys	Thr	Ala	Leu	Asp	Asp
385				390		395									400
Arg	Pro	Gln	Val	Leu	Gln	Pro	His	Arg	Leu	Arg	Ser	Phe	Ser	Ala	Ser
		405		410		415									
Gln	Ser	Thr	Asp	Arg	Glu	Gly	Ala	Ser	Pro	Val	Thr	Glu	Val	Arg	Ile
		420		425		430									
Lys	Thr	Glu	Pro	Ser	Ser	Pro	Leu	Ser	Asp	Pro	Ser	Asp	Ile	Ile	Arg
		435		440		445									
Val	Thr	Val	Gly	Asp	Ala	Ala	Thr	Thr	Ala	Ala	Ala	Ser	Ser	Ser	Ser
		450		455		460									
Val	Thr	Arg	Asp	Leu	Ser	Leu	Lys	Thr	Glu	Asp	Asp	Gln	Lys	Asp	Met
465				470		475									480
Ser	Arg	Leu	Pro	Ala	Lys	Arg	Arg	Phe	Gln	Ala	Asp	Arg	Arg	Leu	Pro
		485		490		495									
Phe	Lys	Lys	Leu	Lys	Val	Asn	Glu	His	Gly	Ser	Pro	Val	Ser	Glu	Asp
		500		505		510									
Asn	Phe	Glu	Glu	Gly	Ser	Ser	Pro	Thr	Leu	Leu	Asp	Ala	Asp	Phe	Pro
		515		520		525									
Asp	Ser	Asp	Leu	Asn	Lys	Asp	Glu	Phe	Gly	Glu	Leu	Glu	Gly	Thr	Arg
		530		535		540									
Pro	Asn	Lys	Lys	Phe	Lys	Cys	Lys	His	Cys	Leu	Lys	Ile	Phe	Arg	Ser
		545		550		555									560
Thr	Ala	Gly	Leu	His	Arg	His	Val	Asn	Met	Tyr	His	Asn	Pro	Glu	Lys
		565		570		575									
Pro	Tyr	Ala	Cys	Asp	Ile	Cys	His	Lys	Arg	Phe	His	Thr	Asn	Phe	Lys
		580		585		590									
Val	Trp	Thr	His	Cys	Gln	Thr	Gln	His	Gly	Ile	Val	Lys	Asn	Pro	Ser
		595		600		605									
Pro	Ala	Ser	Ser	Ser	His	Ala	Val	Leu	Asp	Glu	Lys	Phe	Gln	Arg	Lys
		610		615		620									
Leu	Ile	Asp	Ile	Val	Arg	Glu	Arg	Glu	Ile	Lys	Lys	Ala	Leu	Ile	Ile
625				630		635									640
Lys	Leu	Arg	Arg	Gly	Lys	Pro	Gly	Phe	Gln	Gly	Gln	Ser	Ser	Ser	Gln
		645		650		655									
Ala	Gln	Gln	Val	Ile	Lys	Arg	Asn	Leu	Arg	Ser	Arg	Ala	Lys	Gly	Ala



<210> 3401  
<211> 579

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3401

gttgaaaata aggaaaagga cagcaatatg ccacactttc aaactttgca agctattgtt  
 60  
 tctcacttcc aaaagttatt tgatgtgcct tctttaaatg gagtctatcc ccgaatgaat  
 120  
 gaagtttata ctaggcttgg agaaatgaac aatgctgtga gaaacctcca agaactctta  
 180  
 gaattagata gttcatcctc attgtgtgtg ctagtaagca ctggttgaaa actctgtagg  
 240  
 ctgattaatg aagatgtgaa tgagcagggt atgcagggtat taggacctga agacctccag  
 300  
 agcattatct acaaattgga agaacacgag gaatttttcc cagcatttca ggcatttact  
 360  
 aatgatctac ttgaaatctt agaaattgat gactctggat gccattgtac ctgcagtaaa  
 420  
 gaaattaaaa gtactttcat actgaaaaca aatcaaatca tttttactgt gtaaattgta  
 480  
 ttcttaacat tttgtatttt gtaggattga tcttattttg agacaagggt tgtaaaatgt  
 540  
 atttgccttc agaattcatc cccttcttag tattaggtc  
 579

&lt;210&gt; 3402

&lt;211&gt; 148

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3402

Met	Pro	His	Phe	Gln	Thr	Leu	Gln	Ala	Ile	Val	Ser	His	Phe	Gln	Lys
1				5					10					15	
Leu	Phe	Asp	Val	Pro	Ser	Leu	Asn	Gly	Val	Tyr	Pro	Arg	Met	Asn	Glu
			20					25					30		
Val	Tyr	Thr	Arg	Leu	Gly	Glu	Met	Asn	Asn	Ala	Val	Arg	Asn	Leu	Gln
		35					40					45			
Glu	Leu	Leu	Glu	Leu	Asp	Ser	Ser	Ser	Ser	Leu	Cys	Val	Leu	Val	Ser
		50				55					60				
Thr	Val	Gly	Lys	Leu	Cys	Arg	Leu	Ile	Asn	Glu	Asp	Val	Asn	Glu	Gln
65					70					75				80	
Val	Met	Gln	Val	Leu	Gly	Pro	Glu	Asp	Leu	Gln	Ser	Ile	Ile	Tyr	Lys
			85					90						95	
Leu	Glu	Glu	His	Glu	Glu	Phe	Phe	Pro	Ala	Phe	Gln	Ala	Phe	Thr	Asn
			100					105					110		
Asp	Leu	Leu	Glu	Ile	Leu	Glu	Ile	Asp	Asp	Ser	Gly	Cys	His	Cys	Thr
		115					120					125			
Cys	Ser	Lys	Glu	Ile	Lys	Ser	Thr	Phe	Ile	Leu	Lys	Thr	Asn	Gln	Ile
		130				135						140			
Ile	Phe	Thr	Val												
145															

&lt;210&gt; 3403

&lt;211&gt; 1696

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3403

aaaaacatca gtgtctgtgg gtagttagaa tcttcagttc ctgtgagcgt cggcgtcttc  
60  
tgggcctgtg gagtttcttg gacaggggcc gcggggctcc aggacggcgc ccttagcgac  
120  
accatggccc gaaatgcaga aaaggccatg acggccttag caagatttcg ccaggctcag  
180  
ctggaagagg gaaaagtga ggaacgaaga ccctttcttg cctcagaatg tactgaactg  
240  
cctaaagctg agaagtggag acgacagatc attggagaga tctctaaaaa agtggctcag  
300  
attcagaatg ctggtttagg tgaatttcga attcgtgacc tgaatgatga aattaacaag  
360  
ctgctaaggg agaaaggaca ctgggaggtc cggataaagg agctgggagg tcctgattat  
420  
ggaaaagttg gccctaaaat gctggatcat gaaggaaaag aagtcccagg aaaccgaggt  
480  
tacaagtact ttggagcagc aaaagatttg cctggtgtta gagagctgtt tgaaaaanga  
540  
acctcttcct cctcccagnn aaagacacgt gctgagctca tgaaggcaat cgattttgag  
600  
tactatggtt acctagatga agatgatggt gttattgtgc ctttggaaca ggaatatgaa  
660  
aagaaactca gagccgagtt agtggaaaag tggaaagcag agagagaggc tcggctggca  
720  
agaggagaaa aggaagagga ggaggaagag gaggaagaga tcaacatcta tgcagtcacc  
780  
gaggaggagt cggacgagga aggcagccag gagaaaggag gggacgacag ccagcagaag  
840  
ttcattgctc acgtccctgt tccctcgag caagagattg aggaggcact ggtgcgaagg  
900  
aagaaaatgg aactcctcca gaagtatgca agcgagaccc tgcaggccca aagtgaagaa  
960  
gccagaaggc tcctggggta ttaggaccca gctggggctc tccttgaggt tcttccatcc  
1020  
cccagtggta cctcaggacc cagggtgca gacacaggct ggtgctgcaa gggctcctgc  
1080  
cccattctca gccttccttc cctctccttg tctcatgttg accggagggt aggggtctgt  
1140  
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1200  
ttattgtgga gtgtatacaa caggttgca actggctgcc tgtgtcttat tttgacttgc  
1260  
actgccattt tgaggggaga agaataatt agtggcaaac atttaaaaat gcaatttttt  
1320  
gcagaccaa gtataatttt aaaaaatgca aattttctaa aagacacatc tcttgaaaaa  
1380  
tgagatgatg tggccaggcg cagtggctca cgctgtaac ccagcactt tgggaggccg  
1440  
aggcgggagg gtcacgaggt caagagatgg agaccatcct ggccaacatg gtgaaacccc  
1500

atgtctacta aaaatacaaa aaaattagct gggcgtactg gcatgcacct gtagtcccag  
 1560  
 ctgctttggg aggctgaggc aggagaatca cttgaacccc cggaggtgga gggttgagtg  
 1620  
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 1680  
 aaaaaaaaaa aagttt  
 1696

<210> 3404  
 <211> 286  
 <212> PRT  
 <213> Homo sapiens

<400> 3404  
 Met Ala Arg Asn Ala Glu Lys Ala Met Thr Ala Leu Ala Arg Phe Arg  
 1 5 10 15  
 Gln Ala Gln Leu Glu Glu Gly Lys Val Lys Glu Arg Arg Pro Phe Leu  
 20 25 30  
 Ala Ser Glu Cys Thr Glu Leu Pro Lys Ala Glu Lys Trp Arg Arg Gln  
 35 40 45  
 Ile Ile Gly Glu Ile Ser Lys Lys Val Ala Gln Ile Gln Asn Ala Gly  
 50 55 60  
 Leu Gly Glu Phe Arg Ile Arg Asp Leu Asn Asp Glu Ile Asn Lys Leu  
 65 70 75 80  
 Leu Arg Glu Lys Gly His Trp Glu Val Arg Ile Lys Glu Leu Gly Gly  
 85 90 95  
 Pro Asp Tyr Gly Lys Val Gly Pro Lys Met Leu Asp His Glu Gly Lys  
 100 105 110  
 Glu Val Pro Gly Asn Arg Gly Tyr Lys Tyr Phe Gly Ala Ala Lys Asp  
 115 120 125  
 Leu Pro Gly Val Arg Glu Leu Phe Glu Lys Xaa Thr Ser Ser Ser Ser  
 130 135 140  
 Gln Xaa Lys Thr Arg Ala Glu Leu Met Lys Ala Ile Asp Phe Glu Tyr  
 145 150 155 160  
 Tyr Gly Tyr Leu Asp Glu Asp Asp Gly Val Ile Val Pro Leu Glu Gln  
 165 170 175  
 Glu Tyr Glu Lys Lys Leu Arg Ala Glu Leu Val Glu Lys Trp Lys Ala  
 180 185 190  
 Glu Arg Glu Ala Arg Leu Ala Arg Gly Glu Lys Glu Glu Glu Glu Glu  
 195 200 205  
 Glu Glu Glu Glu Ile Asn Ile Tyr Ala Val Thr Glu Glu Glu Ser Asp  
 210 215 220  
 Glu Glu Gly Ser Gln Glu Lys Gly Gly Asp Asp Ser Gln Gln Lys Phe  
 225 230 235 240  
 Ile Ala His Val Pro Val Pro Ser Gln Gln Glu Ile Glu Glu Ala Leu  
 245 250 255  
 Val Arg Arg Lys Lys Met Glu Leu Leu Gln Lys Tyr Ala Ser Glu Thr  
 260 265 270  
 Leu Gln Ala Gln Ser Glu Glu Ala Arg Arg Leu Leu Gly Tyr  
 275 280 285

<210> 3405  
 <211> 402

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3405

ggggtgggagg cccccttgca ggagaggctg gcgttctatc agacagcaat tgaaagcgcc  
 60  
 agacaagctg gagacagcgc caagatgcgg cgctacgatc gggggcttaa aacactggaa  
 120  
 aacctgctcg cctccatccg taagggcaat gccattgacg aagcggacat cccgccgcca  
 180  
 gtggccatag gaaaaggccc ggcgtccacg cctacctaca gccctgcacc caccagccg  
 240  
 gcccctagaa tcgcgtcagc cccagagccc agggtcaccc tggagggacc ttctgccacc  
 300  
 gccccagcct catctccagg cttggctaag ccccagatgc ccccaggtcc ctgcagccct  
 360  
 ccctctggcc cagttgcaga gccgccagcg cgactacaag ct  
 402

&lt;210&gt; 3406

&lt;211&gt; 134

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3406

Gly	Trp	Glu	Ala	Pro	Leu	Gln	Glu	Arg	Leu	Ala	Phe	Tyr	Gln	Thr	Ala
1				5					10					15	
Ile	Glu	Ser	Ala	Arg	Gln	Ala	Gly	Asp	Ser	Ala	Lys	Met	Arg	Arg	Tyr
			20					25					30		
Asp	Arg	Gly	Leu	Lys	Thr	Leu	Glu	Asn	Leu	Leu	Ala	Ser	Ile	Arg	Lys
		35					40					45			
Gly	Asn	Ala	Ile	Asp	Glu	Ala	Asp	Ile	Pro	Pro	Pro	Val	Ala	Ile	Gly
	50					55					60				
Lys	Gly	Pro	Ala	Ser	Thr	Pro	Thr	Tyr	Ser	Pro	Ala	Pro	Thr	Gln	Pro
65					70					75				80	
Ala	Pro	Arg	Ile	Ala	Ser	Ala	Pro	Glu	Pro	Arg	Val	Thr	Leu	Glu	Gly
			85						90					95	
Pro	Ser	Ala	Thr	Ala	Pro	Ala	Ser	Ser	Pro	Gly	Leu	Ala	Lys	Pro	Gln
			100					105					110		
Met	Pro	Pro	Gly	Pro	Cys	Ser	Pro	Pro	Ser	Gly	Pro	Val	Ala	Glu	Pro
		115					120					125			
Pro	Ala	Arg	Leu	Gln	Ala										
															130

&lt;210&gt; 3407

&lt;211&gt; 535

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3407

ggaatgaggg gggatgggga agaaccccc aggacagcac caagcaggtc tgcggggacc  
 60  
 tttcccggac accatgcctt ctcggcggtg aggcagggtg cggcaccgac aggcccgggg  
 120

gggacctttc ccggacaccc aacctcctcg gtggcgaggc aggtggcggc accgacaggc  
 180  
 ccggcgggga cctttcccgg ancacctggc ctccttggca agcaggtggc ggcaccaaca  
 240  
 ggccccgggg ggacctttcc cggacacctg gcctcctcgg cgaggcaggt ggcagaactg  
 300  
 gtccacgtc tgatcttcct tagacaaacc tgccttcaga ggaaattgtg ttcaactgga  
 360  
 gaaactggaa aatgtactag atattggctg atatgaagga tatatgtttt aagtatgata  
 420  
 attcgatttt ggctctgtag ggaaaggctc ttattttaaa aagatgtgca ctagagaaaa  
 480  
 aggaacagc atgtagcaaa tacatccacg gatgtcctcc tggtttaaaa aaaaa  
 535

<210> 3408  
 <211> 131  
 <212> PRT  
 <213> Homo sapiens

<400> 3408  
 Gly Met Arg Gly Asp Gly Glu Glu Pro Pro Arg Thr Ala Pro Ser Arg  
 1 5 10 15  
 Ser Ala Gly Thr Phe Pro Gly His His Ala Phe Ser Ala Val Arg Gln  
 20 25 30  
 Val Ala Ala Pro Thr Gly Pro Gly Gly Thr Phe Pro Gly His Pro Thr  
 35 40 45  
 Ser Ser Val Ala Arg Gln Val Ala Ala Pro Thr Gly Pro Ala Gly Thr  
 50 55 60  
 Phe Pro Gly Xaa Pro Gly Leu Leu Gly Lys Gln Val Ala Ala Pro Thr  
 65 70 75 80  
 Gly Pro Gly Gly Thr Phe Pro Gly His Leu Ala Ser Ser Ala Arg Gln  
 85 90 95  
 Val Ala Glu Leu Val Pro Arg Leu Ile Phe Leu Arg Gln Thr Cys Leu  
 100 105 110  
 Gln Arg Lys Leu Cys Ser Thr Gly Glu Thr Gly Lys Cys Thr Arg Tyr  
 115 120 125  
 Trp Leu Ile  
 130

<210> 3409  
 <211> 959  
 <212> DNA  
 <213> Homo sapiens

<400> 3409  
 nagatctccg aggacaccgg acgggagcgc ttggccatcc tctctccggc agaggagcag  
 60  
 acgtttgctt tccaagtgca aaactacaga cacgcgcgcg cacacacgca agcacacgcg  
 120  
 gagagagagg aaccttgccg gtccgaggca gctctgcgcg tcccctcctg cgcttagcat  
 180  
 cctcggccca gcgcggcccc caccgccatg gaggtgctgg agagcgggga gcagggcgtg  
 240

ctgcagtggg accgcaagct gagcgagctg tcagagcccc gggacggcga ggccctcatg  
 300  
 taccacacgc acttctcaga acttctggat gagttttccc agaacgtctt gggtcagctc  
 360  
 ctgaatgata ctttctcttc agagaagagt gtgtcaatgg aggtggaacc ttccccgacg  
 420  
 tccccggcgc ctctcatcca ggctgagcac agctactccc tgtgcgagga gcctcggggc  
 480  
 cagtcgcctt tcacccacat taccaccagt gacagcttca atgacgatga ggtggaaagt  
 540  
 nngagaaatg gtacctgtct acagacttcc cttcaacatc catcaagaca gagccagtta  
 600  
 cagacgaacc acccccagga ctctgtccgt ctgtcactct gaccatcaca gccatctcca  
 660  
 cccnctgttg aaaaggagga acctctctg gaaatgaaca ctgggggttg ttcctcgtgc  
 720  
 cagaccatta ttcctaaaat taagctggag cctcatgaag tggatcagtt tctaaacttc  
 780  
 tctcctaaag aaggtctgtc tngccctccc tgtgtccctt tgggttatgg atatggtctc  
 840  
 tgggtctaca gagagggaaat atggcgagag agctgggatg agtttgtacc acagatgttg  
 900  
 tagctggctt tatgaaatag ctctgttctt aaaaaataaa aattttgctt ccaaataaa  
 959

&lt;210&gt; 3410

&lt;211&gt; 144

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3410

Met	Glu	Val	Leu	Glu	Ser	Gly	Glu	Gln	Gly	Val	Leu	Gln	Trp	Asp	Arg
1				5					10					15	
Lys	Leu	Ser	Glu	Leu	Ser	Glu	Pro	Gly	Asp	Gly	Glu	Ala	Leu	Met	Tyr
			20					25					30		
His	Thr	His	Phe	Ser	Glu	Leu	Leu	Asp	Glu	Phe	Ser	Gln	Asn	Val	Leu
		35					40					45			
Gly	Gln	Leu	Leu	Asn	Asp	Pro	Phe	Leu	Ser	Glu	Lys	Ser	Val	Ser	Met
	50				55					60					
Glu	Val	Glu	Pro	Ser	Pro	Thr	Ser	Pro	Ala	Pro	Leu	Ile	Gln	Ala	Glu
65				70					75					80	
His	Ser	Tyr	Ser	Leu	Cys	Glu	Glu	Pro	Arg	Ala	Gln	Ser	Pro	Phe	Thr
			85					90						95	
His	Ile	Thr	Thr	Ser	Asp	Ser	Phe	Asn	Asp	Asp	Glu	Val	Glu	Ser	Xaa
			100					105					110		
Arg	Asn	Gly	Thr	Cys	Leu	Gln	Thr	Ser	Leu	Gln	His	Pro	Ser	Arg	Gln
		115				120						125			
Ser	Gln	Leu	Gln	Thr	Asn	His	Pro	Gln	Asp	Ser	Phe	Arg	Leu	Ser	Leu
	130					135						140			

&lt;210&gt; 3411

&lt;211&gt; 958

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens



&lt;400&gt; 3411

nngcgcgcgcg gttttgttgt tattgcgagg gggtcgcggt ggggcggggc agtgaccccg  
 60  
 ggccggccgt tgtgccctca tccctccac ccttccttcg tatagcttcc tttctcctca  
 120  
 cgacggcctc cacagtccgg agcccgccgg agcccgacc tggcggggag agctgcctcc  
 180  
 acggccgggc acccagaccc caccgtcgca gtcgccacca cctcagtcca tccttggtac  
 240  
 cggcaatggg cttcgtatcc tccagtgcac ttgtaactga cttggacacg gaataactaag  
 300  
 aactcacttc tgtcctcacc ccagtcgcgc cggcgggtgac catctcggct cttttgggct  
 360  
 taactgccgc tcctctggac tctgtctgac tttgggggca ccatggacca aagtgggatg  
 420  
 gagattcctg tgaccctcat cattaaagca ccgaatcaga aatacagtga ccagactatt  
 480  
 agctgcttct tgaactggac cgtggggaaa ctaaaaacgc atctatctaa cgtttaccct  
 540  
 agcaaaccat tgacgaagga tcagagattg gtgtattcgg gcagactgct tcccgatcat  
 600  
 ctgcagtga aagacattct cagaaaacaa gatgagtatc atatggttca tctagtatgt  
 660  
 acttctcgga ctctcccag ttctccaaaa tccagcacca atagagaaag tcatgaagca  
 720  
 ttggcatcca gcagcaattc tagttcagat cattcaggat caacaactcc atcatctggt  
 780  
 caagaaacct tgtcttttagc tgtgggttct tcctcagaag gattgaggca gcgtaccctt  
 840  
 ccacaagcac aaactgacca agcacagagt caccagtttc catatgtaat gcaaggaaat  
 900  
 gtagacaacc aatttcctgg gcaagctgct ccacctggat tcccagtgtg tcccgcgg  
 958

&lt;210&gt; 3412

&lt;211&gt; 185

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3412

Met	Asp	Gln	Ser	Gly	Met	Glu	Ile	Pro	Val	Thr	Leu	Ile	Ile	Lys	Ala
1				5					10					15	
Pro	Asn	Gln	Lys	Tyr	Ser	Asp	Gln	Thr	Ile	Ser	Cys	Phe	Leu	Asn	Trp
		20						25					30		
Thr	Val	Gly	Lys	Leu	Lys	Thr	His	Leu	Ser	Asn	Val	Tyr	Pro	Ser	Lys
		35					40					45			
Pro	Leu	Thr	Lys	Asp	Gln	Arg	Leu	Val	Tyr	Ser	Gly	Arg	Leu	Leu	Pro
	50					55					60				
Asp	His	Leu	Gln	Leu	Lys	Asp	Ile	Leu	Arg	Lys	Gln	Asp	Glu	Tyr	His
65					70					75				80	
Met	Val	His	Leu	Val	Cys	Thr	Ser	Arg	Thr	Pro	Pro	Ser	Ser	Pro	Lys
			85						90					95	
Ser	Ser	Thr	Asn	Arg	Glu	Ser	His	Glu	Ala	Leu	Ala	Ser	Ser	Ser	Asn

			100					105						110					
Ser	Ser	Ser	Asp	His	Ser	Gly	Ser	Thr	Thr	Pro	Ser	Ser	Gly	Gln	Glu				
		115					120					125							
Thr	Leu	Ser	Leu	Ala	Val	Gly	Ser	Ser	Ser	Glu	Gly	Leu	Arg	Gln	Arg				
	130					135					140								
Thr	Leu	Pro	Gln	Ala	Gln	Thr	Asp	Gln	Ala	Gln	Ser	His	Gln	Phe	Pro				
145					150					155					160				
Tyr	Val	Met	Gln	Gly	Asn	Val	Asp	Asn	Gln	Phe	Pro	Gly	Gln	Ala	Ala				
			165					170					175						
Pro	Pro	Gly	Phe	Pro	Val	Tyr	Pro	Ala											
			180					185											

&lt;210&gt; 3413

&lt;211&gt; 3344

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3413

nntcagaaac tatttcttga gtccgttctt ctcagagttt attacttcct cccacgtctt  
60

ggtctgctgg tctaattccc ttcaataacc ttcaacatag gaaaaaacca gagtgtgttg  
120

tgtgtcttta aagatattag agaagtggga gctgttgccc caaaactgtt ttcttatgta  
180

gctactgaag gaacagaaag caggaagaaa gaaaaaagtt agttgtggcc ccagaagagt  
240

tgtttttcaa atgccgagcc gtgaagcctc atgcactcaa cacaaagttt ttctttcata  
300

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&lt;211&gt; 723

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3414

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&lt;211&gt; 3501

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3415

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&lt;211&gt; 259

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3416

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&lt;210&gt; 3422

&lt;211&gt; 418

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3422

Met	Ser	Arg	His	Leu	Pro	Trp	Ile	Cys	Asp	Gln	Arg	Cys	Ser	Ser	Pro
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Phe	Ser	Ser	Lys	Thr	Val	Thr	Val	Leu	Leu	Leu	Ala	Gln	Thr	Thr	Cys		
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Leu	Cys	Asp	Met	Asp	Val	Phe	Asp	Ala	Tyr	Met	Glu	Pro	Gly	Pro	Arg		
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Glu	Val	Cys	Arg	Ser	His	Val	Arg	Ile	Ala	Glu	Ala	Ala	Thr	Leu	Lys		
		275					280					285					
Pro	Pro	Pro	Phe	Leu	Arg	Gly	Arg	Tyr	Arg	Leu	Val	Arg	Phe	Glu	Asp		
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Leu	Ala	Arg	Glu	Pro	Leu	Ala	Glu	Ile	Arg	Ala	Leu	Tyr	Ala	Phe	Thr		
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Gly	Leu	Thr	Leu	Thr	Pro	Gln	Leu	Glu	Ala	Trp	Ile	His	Asn	Ile	Thr		
			325					330						335			
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			340					345					350				
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		355					360					365					
Thr	Lys	Ile	Leu	Arg	Val	Gln	Glu	Val	Cys	Ala	Gly	Ala	Leu	Gln	Leu		
	370					375				380							
Leu	Gly	Tyr	Arg	Pro	Val	Tyr	Ser	Ala	Asp	Gln	Gln	Arg	Asp	Leu	Thr		
385					390					395					400		
Leu	Asp	Leu	Val	Leu	Pro	Arg	Gly	Pro	Asp	His	Phe	Ser	Trp	Ala	Ser		
			405					410						415			

Pro Asp

&lt;210&gt; 3423

&lt;211&gt; 1851

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3423

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 <211> 136  
 <212> PRT  
 <213> Homo sapiens

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 Ala Ser Tyr Gly Val Arg Gln Asp Gly Asp Pro Ala Phe Leu Tyr Leu  
 35 40 45  
 Leu Ser Ala Pro Arg Glu Ala Pro Ala Thr Gly Pro Ser Pro Gln His  
 50 55 60  
 Pro Gln Lys Met Asp Gly Glu Leu Gly Arg Leu Phe Pro Pro Ser Leu  
 65 70 75 80  
 Gly Leu Pro Pro Gly Pro Gln Pro Ala Ala Ser Ser Leu Pro Ser Pro  
 85 90 95  
 Leu Gln Pro Ser Trp Ser Cys Pro Ser Cys Thr Phe Ile Asn Ala Pro  
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<210> 3425  
 <211> 1416  
 <212> DNA  
 <213> Homo sapiens

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&lt;210&gt; 3426

&lt;211&gt; 410

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3426

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			20					25					30		
Ser	Leu	Gly	Arg	Asp	Pro	Gly	Arg	Glu	Glu	Glu	Val	Arg	Pro	Arg	Gly
		35					40					45			
Arg	Lys	Ala	Ala	Ser	Pro	Gly	Ala	Pro	Arg	Pro	Trp	Pro	Arg	His	Ser
	50					55					60				
Thr	His	Met	Ala	Ser	Gly	Val	Gly	Ala	Ala	Phe	Glu	Glu	Leu	Pro	His

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Asp	Gly	Thr	Cys	Asp	Glu	Cys	Glu	Pro	Asp	Glu	Ala	Pro	Gly	Ala	Glu
				85					90					95	
Glu	Val	Cys	Arg	Glu	Cys	Gly	Phe	Cys	Tyr	Cys	Arg	Arg	His	Ala	Glu
			100					105					110		
Ala	His	Arg	Gln	Lys	Phe	Leu	Ser	His	His	Leu	Ala	Glu	Tyr	Val	His
			115				120					125			
Gly	Ser	Gln	Ala	Trp	Thr	Pro	Pro	Ala	Asp	Gly	Glu	Gly	Ala	Gly	Lys
			130			135					140				
Glu	Glu	Ala	Glu	Val	Lys	Val	Glu	Gln	Glu	Arg	Glu	Ile	Glu	Ser	Glu
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Ala	Gly	Glu	Glu	Ser	Glu	Ser	Glu	Glu	Glu	Ser	Glu	Ser	Glu	Glu	Glu
				165					170				175		
Ser	Glu	Thr	Glu	Glu	Glu	Ser	Glu	Asp	Glu	Ser	Asp	Glu	Glu	Ser	Glu
			180					185					190		
Glu	Asp	Ser	Glu	Glu	Glu	Met	Glu	Asp	Glu	Gln	Glu	Ser	Glu	Ala	Glu
			195				200					205			
Glu	Asp	Asn	Gln	Glu	Glu	Gly	Glu	Ser	Glu	Ala	Glu	Gly	Glu	Thr	Glu
			210			215					220				
Ala	Glu	Ser	Glu	Phe	Asp	Pro	Glu	Ile	Glu	Met	Glu	Ala	Glu	Arg	Val
225					230					235					240
Ala	Lys	Arg	Lys	Cys	Pro	Asp	His	Gly	Leu	Asp	Leu	Ser	Thr	Tyr	Cys
				245					250					255	
Gln	Glu	Asp	Arg	Gln	Leu	Ile	Cys	Val	Leu	Cys	Pro	Val	Ile	Gly	Ala
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			275				280					285			
Arg	Ser	Lys	Asp	Ser	Gly	Gly	Leu	Lys	Ala	Ala	Met	Ile	Glu	Leu	Val
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Met	Lys	Met	Phe	Ile	Gln	Gln	Glu	Phe	Lys	Lys	Val	Gln	Lys	Val	Ile
				325					330					335	
Ala	Asp	Glu	Glu	Gln	Lys	Ala	Leu	His	Leu	Val	Asp	Ile	Gln	Glu	Ala
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			355				360					365			
Met	Asp	Arg	Leu	Met	Thr	Gln	Met	Ala	Gln	Ala	Lys	Glu	Gln	Leu	Asp
			370			375					380				
Thr	Ser	Asn	Glu	Ser	Ala	Glu	Pro	Lys	Ala	Glu	Gly	Asp	Glu	Glu	Gly
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Pro	Ser	Gly	Ala	Ser	Glu	Glu	Glu	Asp	Thr						
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&lt;210&gt; 3427

&lt;211&gt; 580

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3427

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120

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 <212> PRT  
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 Met Glu Thr Glu Asp Cys Glu Lys Met Ser Asn Met Gly Thr Leu Asn  
 35 40 45  
 Ser Ser Met Leu His Arg Ser Ala Glu Ser Leu Lys Ser Leu Ser Ser  
 50 55 60  
 Glu Leu Cys Pro Glu Lys Ile Leu Pro Glu Glu Lys Pro Val His Leu  
 65 70 75 80  
 Pro Val Leu Arg Arg Ser Lys Ser Gln Ser Arg Pro Gln Gln Val Lys  
 85 90 95  
 Phe Ser Asp Asp Val Ile Asp Asn Gly Asn Tyr Asp Ile Glu Ile Arg  
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 115 120 125  
 Glu Arg Gly Ser  
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<210> 3429  
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 <212> DNA  
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&lt;210&gt; 3432

&lt;211&gt; 296

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3432

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Arg	Val	Ala	Leu	Ala	Gly	Glu	Leu	Val	Gly	Val	Gly	Gly	His	Phe	Leu
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	85	90
Glu Ala Gln Ser Val Leu Arg Ile Leu Ala Glu Arg Asn Arg Pro His		95
	100	105
Gly Gln Met Leu Gly Glu Glu Ala Gln Glu Ala Leu Gln Asp Leu Glu		110
	115	120
Asn Thr Cys Pro Leu Pro Ala Thr Ser Ser Phe Ser Phe Ala Ser Leu		125
	130	135
Leu Asn Tyr Arg Asn Ile Trp Lys Asn Leu Leu Ile Leu Gly Phe Thr		140
	145	150
Asn Phe Ile Ala His Ala Ile Arg His Cys Tyr Gln Pro Val Gly Gly		155
	165	170
Gly Gly Ser Pro Ser Asp Phe Tyr Leu Cys Ser Leu Leu Ala Ser Gly		175
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	195	200
Gly Arg Arg Gly Ile Leu Leu Leu Ser Met Thr Leu Thr Gly Ile Ala		205
	210	215
Ser Leu Val Leu Leu Gly Leu Trp Asp Cys Glu His Pro Ile Phe Pro		220
	225	230
Thr Val Trp Ala Gln Gln Gly Asn Pro Asn Arg Asp Leu Asn Glu Ala		235
	245	250
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	260	265
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Arg Gly Arg Gly Leu Gly Leu Ile		285
	290	295

&lt;210&gt; 3433

&lt;211&gt; 1257

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3433

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&lt;210&gt; 3434

&lt;211&gt; 311

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3434

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	210					215					220						
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Pro	Ser	Ser	Ala	Pro	Ser	Ser	Cys	Leu	His	Trp	His	His	Cys	Pro	Ser		
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&lt;210&gt; 3435

&lt;211&gt; 1225

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3435

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&lt;210&gt; 3436

&lt;211&gt; 408

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3436

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		165					170						175		
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	180					185							190		
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	210				215						220				
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&lt;210&gt; 3438

&lt;211&gt; 105

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3438

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Arg	Pro	Pro	Lys	Arg	Asp	Phe	Gln	Val	Glu	Ala	Thr	Thr	Ala	Glu	Asp
			20					25					30		
Glu	Ala	Glu	Pro	Gln	Trp	Glu	Arg	Glu	Gly	Ala	Arg	Phe	Thr	Thr	Pro

2612



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<212> PRT

<213> Homo sapiens

<400> 3440

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			20					25					30		
Val	Ala	Ala	Ala	Ala	Arg	Trp	Pro	Arg	Gln	Pro	Arg	His	Pro	Arg	His
			35				40					45			
Thr	Ser	Pro	Met	Pro	Pro	Pro	Ala	Ala	Leu	Arg	Pro	Pro	Ala	Gly	Pro
			50			55					60				
Arg	Arg	Pro	Arg	Xaa	Pro	Gly	Gly	Pro	Gln	His	His	Gln	Pro	Gln	Pro
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Pro	Leu	Trp	Thr	Pro	Thr	Pro	Pro	Ser	Pro	Ala	Ser	Asp	Trp	Pro	Pro
				85				90					95		
Leu	Pro	Pro	Asn	Arg	Pro	Pro	Gln	Asn	Pro	Gly	Pro	Thr	Leu	Pro	Trp
			100				105						110		
Arg	Gln	Arg	Asp	Lys	Gly	Gly	Pro	Ser	Pro	Leu	Pro	Glu	Ala	Arg	Thr
			115				120					125			
Pro	Trp	Gly	Gly	Gly	Glu	Asp	Val	Ser	Ala	Gly	Pro	Leu	Xaa	Thr	Pro
			130			135					140				
Phe	Leu	Ser	Ala	Pro	Leu	Val	Pro	Arg	Ser	Pro	Gly	Gly	Glu	Ser	Ala
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Asp	Ser	Ser	Gln	Ala	Gly	Thr	Arg	Leu	Val	Pro	Glu	His	Ala	Ala	Ala
				165					170					175	
His	Thr	Gln	Gly	His	Gly	Pro	Ser	Gly	Pro	Gly	Thr	Trp	Ser	Gly	Ser
			180					185					190		
Glu	Arg	Pro	Gly	Cys	Leu	Ala	Asp	Arg	Thr	Ser	Glu	Thr	Thr	Gln	Pro
			195				200					205			
Ser	Phe	Glu	Asp	Ala	Pro	Ala	Gln	Pro	Ser	Pro	Gly	Val	Pro	Trp	Arg
			210			215					220				
Thr	Thr	Leu	Ala	Glu	Thr	Leu	Leu	Ile	Pro	Gly	Leu	Glu	Leu	Leu	Gly
225					230					235					240
Gly	Arg	Gln	Ala	Ser	Thr	Pro	Thr	Leu	Gly	Asn	Ala	Glu	Pro	Leu	Arg
				245					250					255	
Met	Cys	Ala	Arg	Gly	Arg	Val	Cys	Val	Phe	Leu	Arg	Val	Ser	Leu	Phe



	260		265		270								
Arg	Ser	Asn	Leu	Val	Pro	Gly	Ala	Gly	Leu	Cys	Met	Leu	Val
	275				280					285			

&lt;210&gt; 3441

&lt;211&gt; 2074

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3441

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1320

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 1380  
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 2040  
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 2074

&lt;210&gt; 3442

&lt;211&gt; 374

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3442

Met	Val	Gly	Lys	Asn	Val	Lys	Leu	Tyr	Asp	Met	Val	Leu	Gln	Phe	Leu
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Arg	Thr	Leu	Phe	Leu	Arg	Thr	Arg	Asn	Val	His	Tyr	Cys	Thr	Leu	Arg
			20					25					30		
Ala	Glu	Leu	Leu	Met	Ser	Leu	His	Asp	Leu	Asp	Val	Gly	Glu	Ile	Cys
		35					40					45			
Thr	Val	Asp	Pro	Cys	His	Lys	Phe	Thr	Trp	Cys	Leu	Asp	Ala	Cys	Ile
	50					55					60				
Arg	Glu	Arg	Phe	Val	Asp	Ser	Lys	Arg	Ala	Arg	Glu	Leu	Gln	Gly	Phe
65					70				75					80	
Leu	Asp	Asp	Val	Lys	Lys	Gly	Gln	Glu	Gln	Val	Leu	Gly	Asp	Leu	Ser
			85					90					95		
Met	Ile	Leu	Cys	Asp	Pro	Phe	Ala	Ile	Asn	Thr	Leu	Ala	Leu	Ser	Thr
		100					105					110			
Val	Arg	His	Leu	Gln	Glu	Leu	Val	Gly	Gln	Glu	Thr	Leu	Pro	Arg	Asp
	115						120					125			
Ser	Pro	Asp	Leu	Leu	Leu	Leu	Arg	Leu	Leu	Ala	Leu	Gly	Gln	Gly	
	130					135				140					
Ala	Trp	Asp	Met	Ile	Asp	Ser	Gln	Val	Phe	Lys	Glu	Pro	Lys	Met	Glu
145				150					155					160	
Val	Glu	Leu	Ile	Thr	Arg	Phe	Leu	Pro	Met	Leu	Met	Ser	Phe	Leu	Val

					165						170						175
Asp	Asp	Tyr	Thr	Phe	Asn	Val	Asp	Gln	Lys	Leu	Pro	Ala	Glu	Glu	Lys		
					180												
Ala	Pro	Val	Ser	Tyr	Pro	Asn	Thr	Leu	Pro	Glu	Ser	Phe	Thr	Lys	Phe		
					195												
Leu	Gln	Glu	Gln	Arg	Met	Ala	Cys	Glu	Val	Gly	Leu	Tyr	Tyr	Val	Leu		
					210												
His	Ile	Thr	Lys	Gln	Arg	Asn	Lys	Asn	Ala	Leu	Leu	Arg	Leu	Leu	Pro		
					225												
Gly	Leu	Val	Glu	Thr	Phe	Gly	Asp	Leu	Ala	Phe	Gly	Asp	Ile	Phe	Leu		
					240												
His	Leu	Leu	Thr	Gly	Asn	Leu	Ala	Leu	Leu	Ala	Asp	Glu	Phe	Ala	Leu		
					255												
Glu	Asp	Phe	Cys	Ser	Ser	Leu	Phe	Asp	Gly	Phe	Phe	Leu	Thr	Ala	Ser		
					270												
Pro	Arg	Lys	Glu	Asn	Val	His	Arg	His	Ala	Leu	Arg	Leu	Leu	Ile	His		
					285												
Leu	His	Pro	Arg	Val	Ala	Pro	Ser	Lys	Leu	Glu	Ala	Leu	Gln	Lys	Ala		
					300												
Leu	Glu	Pro	Thr	Gly	Gln	Ser	Gly	Glu	Ala	Val	Lys	Glu	Leu	Tyr	Ser		
					315												
Gln	Leu	Gly	Glu	Lys	Leu	Glu	Gln	Leu	Asp	His	Arg	Lys	Pro	Ser	Pro		
					330												
Ala	Gln	Ala	Ala	Glu	Thr	Pro	Ala	Leu	Glu	Leu	Pro	Leu	Pro	Ser	Val		
					345												
Pro	Ala	Pro	Ala	Pro	Leu												
					360												

&lt;210&gt; 3443

&lt;211&gt; 2070

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3443

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60aacaaaataa aggtatgcta tggttgactat ggttttagtg aaaatggtga aaaaagcaaa  
120gcatacaaat taaacccgaa gttttgttca ctctcatttc aagctacaaa atgtaagctt  
180gcaggcttgg aagtcctaag cgatgaccct gatctagtga aggtgggtga atctttaact  
240tgtggaaaga tctttgcagt ggaaatactt gacaaagctg acattccact tggtgttctg  
300tacgatacct caggagaaga tgatatcaat atcaatgcca cctgcttgaa ggctatatgt  
360gacaagtcac tagaggttca cctgcaggtt gacgccatgt acacaaatgt caaaataact  
420aatatttgct ctgatgggac actctactgc caggtgcctt gtaagggctt gaacaagctc  
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540tttgtttcat tacccttctg tgggaaaatc tgcctcttcc attgcaaagg aaaatgggta  
600

cgagtagaga tcacaaatgt tcacagcagc cgggctcttg atgttcagtt cctggactct  
660  
ggcactgtga catctgtaaa agtgtcagag ctcaggga aa ttccacctcg gtttctacaa  
720  
gaaatgattg caataccacc tcaggccatt aagtgtgtt tagcagatct tccacaatct  
780  
attggcatgt ggacaccaga tgcagtgtg tggttaagag attctgtttt gaattgctcg  
840  
gactgtagca ttaagggttac aaaagtggat gaaaccagag ggatcgcaca tgtttattta  
900  
tttacccta agaacttccc tgacctcat cgcagtatta atcgccagat tacaatgca  
960  
gacttgtgga agcatcagaa ggatgtgttt ttgagtgcc tatccagtgg agctgactct  
1020  
cccaacagca aaaatggcaa catgcccatt tcgggcaaca ctggagagaa tttcagaaag  
1080  
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1860  
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1920  
aaagaaaatt gtacttgaat tattactata atattagaat aaaaatgttt atcaatataa  
1980  
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2040  
aaaaaaaaaa aaaaaaaaaa aaaaaagggg  
2070

&lt;210&gt; 3444

&lt;211&gt; 579

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3444

```

Leu Ala Val Asn Ala Glu Glu Asp Ala Trp Leu Arg Ala Gln Val Ile
 1           5           10           15
Ser Thr Glu Glu Asn Lys Ile Lys Val Cys Tyr Val Asp Tyr Gly Phe
          20           25           30
Ser Glu Asn Val Glu Lys Ser Lys Ala Tyr Lys Leu Asn Pro Lys Phe
          35           40           45
Cys Ser Leu Ser Phe Gln Ala Thr Lys Cys Lys Leu Ala Gly Leu Glu
          50           55           60
Val Leu Ser Asp Asp Pro Asp Leu Val Lys Val Val Glu Ser Leu Thr
65           70           75           80
Cys Gly Lys Ile Phe Ala Val Glu Ile Leu Asp Lys Ala Asp Ile Pro
          85           90           95
Leu Val Val Leu Tyr Asp Thr Ser Gly Glu Asp Asp Ile Asn Ile Asn
          100          105          110
Ala Thr Cys Leu Lys Ala Ile Cys Asp Lys Ser Leu Glu Val His Leu
          115          120          125
Gln Val Asp Ala Met Tyr Thr Asn Val Lys Ile Thr Asn Ile Cys Ser
          130          135          140
Asp Gly Thr Leu Tyr Cys Gln Val Pro Cys Lys Gly Leu Asn Lys Leu
145          150          155          160
Ser Asp Leu Leu Arg Lys Ile Glu Asp Tyr Phe His Cys Lys His Met
          165          170          175
Thr Ser Glu Cys Phe Val Ser Leu Pro Phe Cys Gly Lys Ile Cys Leu
          180          185          190
Phe His Cys Lys Gly Lys Trp Leu Arg Val Glu Ile Thr Asn Val His
          195          200          205
Ser Ser Arg Ala Leu Asp Val Gln Phe Leu Asp Ser Gly Thr Val Thr
          210          215          220
Ser Val Lys Val Ser Glu Leu Arg Glu Ile Pro Pro Arg Phe Leu Gln
225          230          235          240
Glu Met Ile Ala Ile Pro Pro Gln Ala Ile Lys Cys Cys Leu Ala Asp
          245          250          255
Leu Pro Gln Ser Ile Gly Met Trp Thr Pro Asp Ala Val Leu Trp Leu
          260          265          270
Arg Asp Ser Val Leu Asn Cys Ser Asp Cys Ser Ile Lys Val Thr Lys
          275          280          285
Val Asp Glu Thr Arg Gly Ile Ala His Val Tyr Leu Phe Thr Pro Lys
          290          295          300
Asn Phe Pro Asp Pro His Arg Ser Ile Asn Arg Gln Ile Thr Asn Ala
305          310          315          320
Asp Leu Trp Lys His Gln Lys Asp Val Phe Leu Ser Ala Ile Ser Ser
          325          330          335
Gly Ala Asp Ser Pro Asn Ser Lys Asn Gly Asn Met Pro Met Ser Gly
          340          345          350
Asn Thr Gly Glu Asn Phe Arg Lys Asn Leu Thr Asp Val Ile Lys Lys
          355          360          365
Ser Met Val Asp His Thr Ser Ala Phe Ser Thr Glu Glu Leu Pro Pro
          370          375          380
Pro Val His Leu Ser Lys Pro Gly Glu His Met Asp Val Tyr Val Pro
385          390          395          400
Val Ala Cys His Pro Gly Tyr Phe Val Ile Gln Pro Trp Gln Glu Ile

```

405 410 415  
 His Lys Leu Glu Val Leu Met Glu Glu Met Ile Leu Tyr Tyr Ser Val  
 420 425 430  
 Ser Glu Glu Arg His Ile Ala Val Glu Lys Asp Gln Val Tyr Ala Ala  
 435 440 445  
 Lys Val Glu Asn Lys Trp His Arg Val Leu Leu Lys Gly Ile Leu Thr  
 450 455 460  
 Asn Gly Leu Val Ser Val Tyr Glu Leu Asp Tyr Gly Lys His Glu Leu  
 465 470 475 480  
 Val Asn Ile Arg Lys Val Gln Pro Leu Val Asp Met Phe Arg Lys Leu  
 485 490 495  
 Pro Phe Gln Ala Val Thr Ala Gln Leu Ala Gly Val Lys Cys Asn Gln  
 500 505 510  
 Trp Ser Glu Glu Ala Ser Met Val Phe Arg Asn His Val Glu Lys Lys  
 515 520 525  
 Pro Leu Val Ala Leu Val Gln Thr Val Ile Glu Asn Ala Asn Pro Trp  
 530 535 540  
 Asp Arg Lys Val Val Val Tyr Leu Val Asp Thr Ser Leu Pro Asp Thr  
 545 550 555 560  
 Asp Thr Trp Ile His Asp Phe Met Ser Glu Tyr Leu Ile Glu Leu Ser  
 565 570 575  
 Lys Val Asn

&lt;210&gt; 3445

&lt;211&gt; 2086

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3445

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 180  
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 240  
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 420  
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 480  
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 gattttctgg cttttaaaga aatgtttttg gactacagag cagaaaaaga aggccgagga  
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 ctggacttaa gcagtggctt agtggtgact tcattgtgca aatcatcttc tctgccagct  
 660  
 tcccagaaca atctgcggca ctaggtccta cctccagcca atgaatggga tcattctgga  
 720



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1980  
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2040  
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2086

&lt;210&gt; 3446

&lt;211&gt; 169

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3446

Met Asp Ala Leu Glu Gly Glu Ser Phe Ala Leu Ser Phe Ser Ser Ala



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Ser Asp Ala Glu Phe Asp Ala Val Val Gly Tyr Leu Glu Asp Ile Ile			
20	25	30	
Met Asp Asp Glu Phe Gln Leu Leu Gln Arg Asn Phe Met Asp Lys Tyr			
35	40	45	
Tyr Leu Glu Phe Glu Asp Thr Glu Glu Asn Lys Leu Ile Tyr Thr Pro			
50	55	60	
Ile Phe Asn Glu Tyr Ile Ser Leu Val Glu Lys Tyr Ile Glu Glu Gln			
65	70	75	80
Leu Leu Gln Arg Ile Pro Glu Phe Asn Met Ala Ala Phe Thr Thr Thr			
85	90	95	
Leu His His Leu Phe Arg Leu Arg His His Lys Asp Glu Val Ala Gly			
100	105	110	
Asp Ile Phe Asp Met Leu Leu Thr Phe Thr Asp Phe Leu Ala Phe Lys			
115	120	125	
Glu Met Phe Leu Asp Tyr Arg Ala Glu Lys Glu Gly Arg Gly Leu Asp			
130	135	140	
Leu Ser Ser Gly Leu Val Val Thr Ser Leu Cys Lys Ser Ser Ser Leu			
145	150	155	160
Pro Ala Ser Gln Asn Asn Leu Arg His			
165			

&lt;210&gt; 3447

&lt;211&gt; 936

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3447

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gacggcggag cggccggggc ttacagcagc tcggagttgc tggagggcca ggagccggac  
120

ggggtgcgct ttgaccgcga gagggcgcgc cgcctgtggg aagccgtgtc cggtgcccag  
180

ccggtgggta gagaggaagt ggagcacatg atccagaaga accaatgtct cttcaccaac  
240

acccagtgtg aggtttgctg cgccttgctt atttctgagt cccagaagct ggcacattac  
300

cagagcaaaa aacatgccaa caaagtgaag agatacctag caatccatgg aatggagaca  
360

ttaaaggggg aaacgaagaa gctagactca gatcagaaga gcagcagaag caaagacaag  
420

aaccagtgtc gcccctctg taacatgacc ttttctccc ctgtcgtggc ccagtcgcac  
480

tacctgggga agaccacgc aaagaactta aagctgaagc agcagtcac taaggtggaa  
540

gccttgacc agaatagaga gatgatagac ccagacaagt tctgcagcct ctgccatgca  
600

actttcaacg accctgtcat ggctcaacaa cattatgtgg gcaagaaaca cagaaaacag  
660

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720

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780

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gaagactaga ggtgattctg cccagcatcc catatt  
936

<210> 3448  
<211> 302  
<212> PRT  
<213> Homo sapiens

<400> 3448  
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20 25 30  
Leu Leu Glu Gly Gln Glu Pro Asp Gly Val Arg Phe Asp Arg Glu Arg  
35 40 45  
Ala Arg Arg Leu Trp Glu Ala Val Ser Gly Ala Gln Pro Val Gly Arg  
50 55 60  
Glu Glu Val Glu His Met Ile Gln Lys Asn Gln Cys Leu Phe Thr Asn  
65 70 75 80  
Thr Gln Cys Lys Val Cys Cys Ala Leu Leu Ile Ser Glu Ser Gln Lys  
85 90 95  
Leu Ala His Tyr Gln Ser Lys Lys His Ala Asn Lys Val Lys Arg Tyr  
100 105 110  
Leu Ala Ile His Gly Met Glu Thr Leu Lys Gly Glu Thr Lys Lys Leu  
115 120 125  
Asp Ser Asp Gln Lys Ser Ser Arg Ser Lys Asp Lys Asn Gln Cys Cys  
130 135 140  
Pro Ile Cys Asn Met Thr Phe Ser Ser Pro Val Val Ala Gln Ser His  
145 150 155 160  
Tyr Leu Gly Lys Thr His Ala Lys Asn Leu Lys Leu Lys Gln Gln Ser  
165 170 175  
Thr Lys Val Glu Ala Leu His Gln Asn Arg Glu Met Ile Asp Pro Asp  
180 185 190  
Lys Phe Cys Ser Leu Cys His Ala Thr Phe Asn Asp Pro Val Met Ala  
195 200 205  
Gln Gln His Tyr Val Gly Lys Lys His Arg Lys Gln Glu Thr Lys Leu  
210 215 220  
Lys Leu Met Ala Arg Tyr Gly Arg Leu Ala Asp Pro Ala Val Thr Asp  
225 230 235 240  
Phe Pro Ala Gly Lys Gly Tyr Pro Cys Lys Thr Cys Lys Ile Val Leu  
245 250 255  
Asn Ser Ile Glu Gln Tyr Gln Ala His Val Ser Gly Phe Lys His Lys  
260 265 270  
Asn Gln Ser Pro Lys Thr Val Ala Ser Ser Leu Gly Gln Ile Pro Met  
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Gln Arg Gln Pro Ile Gln Lys Asp Ser Thr Thr Leu Glu Asp  
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<210> 3449  
<211> 877

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3449

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&lt;210&gt; 3450

&lt;211&gt; 276

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3450

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 1           5           10           15
Ala Ser Ser Asn Pro Pro Gly Ala Pro Ala Leu Pro Leu His Asn Ser
      20           25           30
Ser Val Thr Ala Asn Ser Gln Ser Pro Ala Leu Leu Ala Gly Thr Asn
      35           40           45
Pro Val Ala Val Val Ala Asp Gly Gly Ser Cys Pro Ala His Tyr Pro
      50           55           60
Val His Glu Cys Val Phe Lys Gly Asp Val Arg Arg Leu Ser Ser Leu
65           70           75           80
Ile Arg Thr His Asn Ile Gly Gln Lys Asp Asn His Gly Asn Thr Pro
      85           90           95
Leu His Leu Ala Val Met Leu Gly Asn Lys Glu Cys Ala His Leu Leu

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<212> DNA
<213> Homo sapiens
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<210> 3452
<211> 192
<212> PRT
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<213> Homo sapiens

<400> 3452

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 1           5           10           15
Leu Ile Ala Thr Asn Thr Thr Glu Asn Ser Thr Arg Glu Glu Val Asn
          20           25           30
Glu Arg Gln Ser His Pro Ala Thr Gln Gln Gln Leu Gly Lys Thr Leu
          35           40           45
Gln Ser Lys Gln Leu Pro Gln Val Pro Arg Pro Leu Gln Leu Phe Ser
          50           55           60
Ala Lys Glu Leu Arg Asp Ser Ser Ile Asp Thr His Gln Tyr His Glu
65           70           75           80
Gly Leu Ser Lys Ala Thr Gln Asp Gln Ile Leu Gln Thr Leu Ile Gln
          85           90           95
Arg Val Arg Arg Gln Asn Leu Leu Ser Val Val Pro Pro Ser Gln Phe
          100          105          110
Asn Phe Ala His Ser Gly Phe Gln Leu Glu Asp Ile Ser Thr Ser Gln
          115          120          125
Arg Phe Met Leu Gly Phe Ala Gly Arg Arg Thr Ser Lys Pro Ala Met
          130          135          140
Ala Gly His Tyr Leu Leu Asn Ile Ser Thr Tyr Gly Arg Gly Ser Glu
145          150          155          160
Ser Phe Arg Arg Thr His Ser Val Asn Pro Glu Asp Arg Phe Cys Leu
          165          170          175
Ser Ser Pro Thr Glu Ala Leu Lys Met Gly Tyr Thr Asn Cys Lys Asn
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<210> 3453

<211> 477

<212> DNA

<213> Homo sapiens

<400> 3453

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<210> 3454

<211> 159

<212> PRT

<213> Homo sapiens

<400> 3454

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          20           25           30
Pro Val Ala Gln Gly Leu Lys Glu Ala Leu Val Asp Thr Leu Thr Gly
          35           40           45
Ile Leu Ser Pro Val Gln Glu Val Arg Ala Ala Ala Glu Glu Gln Ile
          50           55           60
Lys Val Leu Glu Val Thr Glu Glu Phe Gly Val His Leu Ala Glu Leu
65           70           75           80
Thr Val Asp Pro Gln Gly Ala Leu Ala Ile Arg Gln Leu Ala Ser Val
          85           90           95
Ile Leu Lys Gln Tyr Val Glu Thr His Trp Cys Ala Gln Ser Glu Lys
          100          105          110
Phe Arg Pro Pro Glu Thr Thr Glu Arg Ala Lys Ile Val Ile Arg Glu
          115          120          125
Leu Leu Pro Asn Gly Leu Arg Glu Ser Ile Ser Lys Val Arg Ser Ser
          130          135          140
Val Ala Tyr Ala Val Ser Ala Ile Ala His Trp Asp Trp Pro Glu
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<210> 3455

<211> 4886

<212> DNA

<213> Homo sapiens

<400> 3455

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720

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4886

&lt;210&gt; 3456

&lt;211&gt; 117

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3456

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Lys	Lys	Gln	Arg	Arg	Arg	Gly	Arg	Lys	Glu	Gly	Glu	Glu	Asp	Gln	Asn
			20					25					30		
Pro	Pro	Cys	Pro	Arg	Leu	Asn	Gly	Val	Leu	Met	Glu	Val	Glu	Glu	Pro
		35					40					45			
Glu	Val	Leu	Gln	Asp	Ser	Leu	Asp	Arg	Cys	Tyr	Ser	Thr	Pro	Ser	Met
	50					55					60				
Tyr	Phe	Glu	Leu	Pro	Asp	Ser	Phe	Gln	His	Tyr	Arg	Ser	Val	Phe	Tyr
65					70					75				80	
Ser	Phe	Glu	Glu	Glu	His	Ile	Ser	Phe	Ala	Leu	Tyr	Val	Asp	Asn	Arg
				85					90					95	
Phe	Phe	Thr	Leu	Thr	Val	Thr	Ser	Leu	His	Leu	Val	Phe	Gln	Met	Gly
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115

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 <211> 646  
 <212> DNA  
 <213> Homo sapiens

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<210> 3458  
 <211> 61  
 <212> PRT  
 <213> Homo sapiens

<400> 3458  
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 35 40 45  
 Leu Cys Xaa Cys Thr Cys Thr Gln Ala Xaa Ala Gly Lys  
 50 55 60

<210> 3459  
 <211> 592  
 <212> DNA  
 <213> Homo sapiens

<400> 3459  
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 120  
 gaccctactt cactgcaggg ggtcagccc agtctgcctc aggcagaaca agggctctggg  
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 240  
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 480  
 aagacagtca tacctgcccg gccggcactg ccctgctcag cacggggaca atttgaactt  
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<210> 3460  
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 <212> PRT  
 <213> Homo sapiens

<400> 3460  
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 20 25 30  
 Gly Pro Ser Leu Cys Ala Ala Ser Val Cys Leu Leu Gln Asn Lys His  
 35 40 45  
 His Ala Pro Ser Trp Ala Glu Ala Pro Ala Asp Ser Pro Arg Ala Leu  
 50 55 60  
 Gln Ala Cys Pro Val Leu Cys Gln Ala Gly Pro Gly His Val Pro Ala  
 65 70 75 80  
 Pro Gly Ala Gly Leu Gln Arg Gly Gln Trp Ser Ala Leu Lys Thr Val  
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 Ile Pro Ala Arg Pro Ala Leu Pro Cys Ser Ala Arg Gly Gln Phe Glu  
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 Leu Lys Leu  
 115

<210> 3461  
 <211> 474  
 <212> DNA  
 <213> Homo sapiens

<400> 3461  
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 120  
 agctttgcgt ccgtggcaga tgtcagctcc agtcgcagcc gcaccttcg gatggcctg  
 180

ctggaagcca gcatcggggt ggctgggatg ctggcaagcc tcctcggggg ccactggctc  
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 360  
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<210> 3462  
 <211> 101  
 <212> PRT  
 <213> Homo sapiens

<400> 3462  
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 Trp Leu Ala Leu Ala Leu Leu Ile Ala Met Thr Leu Tyr Ala Ala Phe  
 35 40 45  
 Cys Phe Gly Glu Thr Leu Lys Glu Pro Lys Ser Thr Arg Leu Phe Thr  
 50 55 60  
 Phe Arg His His Arg Ser Ile Val Gln Leu Tyr Val Ala Pro Ala Pro  
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<210> 3463  
 <211> 1734  
 <212> DNA  
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 360  
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 420  
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caaaagaaac tttcagaata tatgaaagct ttgatcaata agaaagaact tctcagtga  
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 ggagacggtc agattactgc aattctggac cagaagaact atgtagaaga actgaacaga  
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 1080  
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 1734

&lt;210&gt; 3464

&lt;211&gt; 434

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3464

Xaa	Arg	Arg	Arg	Leu	Arg	Ser	Ala	Pro	Ala	Ala	Ala	Ala	Ala	Ala	Leu
1				5				10						15	
Leu	Glu	Asp	Pro	Ala	Val	Pro	Arg	Leu	Thr	Ala	Ala	Leu	Pro	Ala	Ala
			20					25					30		
Glu	Leu	Pro	Glu	Arg	Arg	Arg	Arg	Gln	Gln	Arg	Gln	Gly	Lys	His	His

35	40	45
Pro Asn Tyr Leu Met Ala	Asn Glu Arg Met Asn	Leu Met Asn Met Ala
50	55	60
Lys Leu Ser Ile Lys Gly	Leu Ile Glu Ser Ala	Leu Asn Leu Gly Arg
65	70	75
Thr Leu Asp Ser Asp Tyr	Ala Pro Leu Gln Gln	Phe Phe Val Val Met
85	90	95
Glu His Cys Leu Lys His	Gly Leu Lys Ala Lys	Lys Lys Thr Phe Leu Gly
100	105	110
Gln Asn Lys Ser Phe Trp	Gly Pro Leu Glu Leu	Val Glu Lys Leu Val
115	120	125
Pro Glu Ala Ala Glu Ile	Thr Ala Ser Val Lys	Asp Leu Pro Gly Leu
130	135	140
Lys Thr Pro Val Gly Arg	Gly Arg Ala Trp Leu	Arg Leu Ala Leu Met
145	150	155
Gln Lys Lys Leu Ser Glu	Tyr Met Lys Ala Leu	Ile Asn Lys Lys Glu
165	170	175
Leu Leu Ser Glu Phe Tyr	Glu Pro Asn Ala Leu	Met Met Glu Glu Glu
180	185	190
Gly Ala Ile Ile Ala Gly	Leu Leu Val Gly Leu	Asn Val Ile Asp Ala
195	200	205
Asn Phe Cys Met Lys Gly	Glu Asp Leu Asp Ser	Gln Val Gly Val Ile
210	215	220
Asp Phe Ser Met Tyr Leu	Lys Asp Gly Asn Ser	Ser Lys Gly Thr Glu
225	230	235
Gly Asp Gly Gln Ile Thr	Ala Ile Leu Asp Gln	Lys Asn Tyr Val Glu
245	250	255
Glu Leu Asn Arg His Leu	Asn Ala Thr Val Asn	Asn Leu Gln Ala Lys
260	265	270
Val Asp Ala Leu Glu Lys	Ser Asn Thr Lys Leu	Thr Glu Glu Leu Ala
275	280	285
Val Ala Asn Asn Arg Ile	Ile Thr Leu Gln Glu	Glu Met Glu Arg Val
290	295	300
Lys Glu Glu Ser Ser Tyr	Ile Leu Glu Ser Asn	Arg Lys Gly Pro Lys
305	310	315
Gln Asp Arg Thr Ala Glu	Gly Gln Ala Leu Ser	Glu Ala Arg Lys His
325	330	335
Leu Lys Glu Glu Thr Gln	Leu Arg Leu Asp Val	Glu Lys Glu Leu Glu
340	345	350
Met Gln Ile Ser Met Arg	Gln Glu Met Glu Leu	Ala Met Lys Met Leu
355	360	365
Glu Lys Asp Val Cys Glu	Lys Gln Asp Ala Leu	Val Ser Leu Arg Gln
370	375	380
Gln Leu Asp Asp Leu Arg	Ala Leu Lys His Glu	Leu Ala Phe Lys Leu
385	390	395
Gln Ser Ser Asp Leu Gly	Val Lys Gln Lys Ser	Glu Leu Asn Ser Arg
405	410	415
Leu Glu Glu Lys Thr Asn	Gln Met Ala Thr Ile	Lys Gln Leu Glu
420	425	430
Gln Arg		

&lt;210&gt; 3465

&lt;211&gt; 2904



&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3465

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120  
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2880  
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2904

&lt;210&gt; 3466

&lt;211&gt; 315

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3466

Thr Arg Pro Pro Glu Arg Ala Met Asp Ala Leu Lys Ser Ala Gly Arg  
 1 5 10 15  
 Ala Leu Ile Arg Ser Pro Ser Leu Ala Lys Gln Ser Trp Gly Gly Gly  
 20 25 30  
 Gly Arg His Arg Lys Leu Pro Glu Asn Trp Thr Asp Thr Arg Glu Thr  
 35 40 45  
 Leu Leu Glu Gly Met Leu Phe Ser Leu Lys Tyr Leu Gly Met Thr Leu  
 50 55 60  
 Val Glu Gln Pro Lys Gly Glu Glu Leu Ser Ala Ala Ala Ile Lys Arg  
 65 70 75 80  
 Ile Val Ala Thr Ala Lys Ala Ser Gly Lys Lys Leu Gln Lys Val Thr  
 85 90 95  
 Leu Lys Val Ser Pro Arg Gly Ile Ile Leu Thr Asp Asn Leu Thr Asn  
 100 105 110  
 Gln Leu Ile Glu Asn Val Ser Ile Tyr Arg Ile Ser Tyr Cys Thr Ala  
 115 120 125  
 Asp Lys Met His Asp Lys Val Phe Ala Tyr Ile Ala Gln Ser Gln His  
 130 135 140  
 Asn Gln Ser Leu Glu Cys His Ala Phe Leu Cys Thr Lys Arg Lys Met  
 145 150 155 160  
 Ala Gln Ala Val Thr Leu Thr Val Ala Gln Ala Phe Lys Val Ala Phe  
 165 170 175  
 Glu Phe Trp Gln Val Ser Lys Glu Glu Lys Glu Lys Arg Asp Lys Ala  
 180 185 190  
 Ser Gln Glu Gly Gly Asp Val Leu Gly Ala Arg Gln Asp Cys Thr Pro  
 195 200 205  
 Pro Leu Lys Ser Leu Val Ala Thr Gly Asn Leu Leu Asp Leu Glu Glu  
 210 215 220  
 Thr Ala Lys Ala Pro Leu Ser Thr Val Ser Ala Asn Thr Thr Asn Met  
 225 230 235 240  
 Asp Glu Val Pro Arg Pro Gln Ala Leu Ser Gly Ser Ser Val Val Trp  
 245 250 255  
 Glu Leu Asp Asp Gly Leu Asp Glu Ala Phe Ser Arg Leu Ala Gln Ser  
 260 265 270  
 Arg Thr Asn Pro Gln Val Leu Asp Thr Gly Leu Thr Ala Gln Asp Met  
 275 280 285  
 His Tyr Ala Gln Cys Leu Ser Pro Val Asp Trp Asp Lys Pro Asp Ser  
 290 295 300  
 Ser Gly Thr Glu Gln Asp Asp Leu Phe Ser Phe  
 305 310 315

&lt;210&gt; 3467

&lt;211&gt; 638

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3467

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 120  
 ggtctgaggt gaaggtccta ggagcatcag ttctctgttg ggatcaaggt tgctgggaca  
 180

gagcttgatc cctgtcaact gctaaaacaa tccaggacaa tccaatagta gagctgaatt  
 240  
 ttgattacct tggtcctgag cttcacagcc ctttggcaga ggaaatcctg tgacactgag  
 300  
 gtgtaaccac aagactggcc caaactgacc ctattctgtt ggtaacagga ggtatagcag  
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 420  
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 480  
 gaacgctttc agaaggggaag ggtccattat cctggaagat ctggtgctga aacctgccat  
 540  
 tccacacctt accataaatg gccaaagtta aagccctcct attgaaacct gcccgccagc  
 600  
 acttctgtgt gccaacctgt cctccctaac ccgtcgac  
 638

<210> 3468

<211> 88

<212> PRT

<213> Homo sapiens

<400> 3468

Met	Ser	Leu	Ser	Ser	Trp	Leu	His	Arg	Glu	Glu	Thr	Leu	Val	Pro	Ser
1				5					10					15	
Tyr	Asp	Phe	Pro	Pro	Leu	Cys	Met	Ser	Gly	Leu	His	Asp	Phe	Gln	Phe
			20					25					30		
Trp	Leu	Cys	Tyr	Thr	Ser	Cys	Tyr	Gln	Gln	Asn	Arg	Val	Ser	Leu	Gly
		35				40						45			
Gln	Ser	Cys	Gly	Tyr	Thr	Ser	Val	Ser	Gln	Asp	Phe	Leu	Cys	Gln	Arg
	50					55				60					
Ala	Val	Lys	Leu	Arg	Thr	Lys	Val	Ile	Lys	Ile	Gln	Leu	Tyr	Tyr	Trp
65				70				75						80	
Ile	Val	Leu	Asp	Cys	Phe	Ser	Ser								
				85											

<210> 3469

<211> 1710

<212> DNA

<213> Homo sapiens

<400> 3469

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 ccgctgctgt gggccccggc tgcggtccgg gccggcccag atgaagacct tagccaccgg  
 120  
 aacaaagaac cgccggcgcc ggcccagcag ctgcagccgc agcctgtggc tgtgcagggc  
 180  
 cccgagccgg cccgggtcga gaaaatattt acaccagcag ctccagttca taccaataaa  
 240  
 gaagatcctg ctacccaaac taatttggga tttatccatg catttgctgc tgccatatca  
 300  
 gttattattg tatctgaatt gggtgataag acatttttta tagcagccat catggcaatg  
 360

cgctataacc gcctgaccgt gctggctggt gcaatgcttg ccttgggact aatgacatgc  
420  
ttgtcagttt tgtttggcta tgccaccaca gtcacccca gggctctatac atactatgtt  
480  
tcaactgtat tatttgccat ttttggcatt agaatgcttc gggaaggctt aaagatgagc  
540  
cctgatgagg gtcaagagga actggaagaa gttcaagctg aattaaagaa gaaagatgaa  
600  
gaatttcaac gaaccaaact tttaaagga ccgggagatg ttgaaacggg tacaagcata  
660  
acagtacctc agaaaaagtg gttgcatttt atttcaccca ttttgttca agctcttaca  
720  
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780  
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840  
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960  
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1020  
tgtacatagt gtacattaca actaaaagta atgggaaaca ctgtattttg tagcattgat  
1080  
ttgtaagttt gaccactta attattatgc ccaaaagata taatcattga ttttatttgt  
1140  
aaagattttt aaaaagggtt gactcctaag tgtgggtttt tcttctctcc aacataatta  
1200  
tgttaatatg gtcttcattt ttcttttgggt gcagaaccgt tgtgcagtgg ggtctaccat  
1260  
gcaattttct ttcagcactg accccttttt aaggaataca aattttctcc ttcactcatt  
1320  
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1380  
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1440  
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1500  
agaactgtct gccaggctcat tcttcctctt ttttttttaa ttgggtagga cacccaatat  
1560  
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1620  
attcatattt tttctatatt gaataaaca tgtaacatag ataacaatat aaataaaagt  
1680  
ggtatgacca gtgaaaaaaaa aaaaaaaaaa  
1710

&lt;210&gt; 3470

&lt;211&gt; 322

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3470

Ala Ala Ala Pro Gly Asn Gly Arg Ala Ser Ala Pro Arg Leu Leu Leu

1	5	10	15
Leu Phe Leu Val Pro Leu Leu Trp Ala Pro Ala Ala Val Arg Ala Gly			
20	25	30	
Pro Asp Glu Asp Leu Ser His Arg Asn Lys Glu Pro Pro Ala Pro Ala			
35	40	45	
Gln Gln Leu Gln Pro Gln Pro Val Ala Val Gln Gly Pro Glu Pro Ala			
50	55	60	
Arg Val Glu Lys Ile Phe Thr Pro Ala Ala Pro Val His Thr Asn Lys			
65	70	75	80
Glu Asp Pro Ala Thr Gln Thr Asn Leu Gly Phe Ile His Ala Phe Val			
85	90	95	
Ala Ala Ile Ser Val Ile Ile Val Ser Glu Leu Gly Asp Lys Thr Phe			
100	105	110	
Phe Ile Ala Ala Ile Met Ala Met Arg Tyr Asn Arg Leu Thr Val Leu			
115	120	125	
Ala Gly Ala Met Leu Ala Leu Gly Leu Met Thr Cys Leu Ser Val Leu			
130	135	140	
Phe Gly Tyr Ala Thr Thr Val Ile Pro Arg Val Tyr Thr Tyr Tyr Val			
145	150	155	160
Ser Thr Val Leu Phe Ala Ile Phe Gly Ile Arg Met Leu Arg Glu Gly			
165	170	175	
Leu Lys Met Ser Pro Asp Glu Gly Gln Glu Glu Leu Glu Glu Val Gln			
180	185	190	
Ala Glu Leu Lys Lys Lys Asp Glu Glu Phe Gln Arg Thr Lys Leu Leu			
195	200	205	
Asn Gly Pro Gly Asp Val Glu Thr Gly Thr Ser Ile Thr Val Pro Gln			
210	215	220	
Lys Lys Trp Leu His Phe Ile Ser Pro Ile Phe Val Gln Ala Leu Thr			
225	230	235	240
Leu Thr Phe Leu Ala Glu Trp Gly Asp Arg Ser Gln Leu Thr Thr Ile			
245	250	255	
Val Leu Ala Ala Arg Glu Asp Pro Tyr Gly Val Ala Val Gly Gly Thr			
260	265	270	
Val Gly His Cys Leu Cys Thr Gly Leu Ala Val Ile Gly Gly Arg Met			
275	280	285	
Ile Ala Gln Lys Ile Ser Val Arg Thr Val Thr Ile Ile Gly Gly Ile			
290	295	300	
Val Phe Leu Ala Phe Ala Phe Ser Ala Leu Phe Ile Ser Pro Asp Ser			
305	310	315	320
Gly Phe			

&lt;210&gt; 3471

&lt;211&gt; 2335

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3471

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gcggacggca gcagcgcgtc gcccgtagcag ttctacaagg tgtgcgtgag cgtgggtgagc  
120

gagaagtgcc gtatcgacac ggagatcctg ccctccctgt tcatgcgctg caccaccgac  
180



ctcaaccgca aggacaagtt ccccgccatc acccacctca agttcctggc ccgggacatg  
240  
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360  
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420  
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1800



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<210> 3472

<211> 631

<212> PRT

<213> Homo sapiens

<400> 3472

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Val	Val	Ala	Thr	Ala	Asp	Gly	Ser	Ser	Ala	Ser	Pro	Val	Gln	Phe	Tyr
			20					25					30		
Lys	Val	Cys	Val	Ser	Val	Val	Ser	Glu	Lys	Cys	Arg	Ile	Asp	Thr	Glu
		35					40					45			
Ile	Leu	Pro	Ser	Leu	Phe	Met	Arg	Cys	Thr	Thr	Asp	Leu	Asn	Arg	Lys
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Asp	Lys	Phe	Pro	Ala	Ile	Thr	His	Leu	Lys	Phe	Leu	Ala	Arg	Asp	Met
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Ser	Glu	Gln	Val	Leu	Leu	Cys	Ala	Ser	Ser	Gln	Thr	Ser	Ser	Ile	Val
			85						90					95	
Glu	Cys	Trp	Ser	Leu	Arg	Lys	Glu	Gly	Leu	Pro	Val	Asn	Asn	Ile	Phe
			100					105						110	
Gln	Gln	Ile	Ser	Pro	Val	Val	Gly	Asp	Lys	Gln	Pro	Thr	Ile	Leu	Lys
		115					120					125			
Trp	Arg	Ile	Leu	Ser	Ala	Thr	Asn	Asp	Leu	Asp	Arg	Val	Ser	Ala	Val
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Ala	Leu	Pro	Lys	Leu	Pro	Ile	Ser	Leu	Thr	Asn	Thr	Asp	Leu	Lys	Val
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			165					170						175	
His	Asp	Gly	Ser	Val	His	Ile	Val	His	Arg	Leu	Ser	Leu	Gln	Thr	Met
			180					185					190		
Ala	Val	Phe	Tyr	Ser	Ser	Ala	Ala	Pro	Arg	Pro	Val	Asp	Glu	Pro	Ala
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	210					215					220				
Gln	Leu	Ser	Trp	Thr	Ser	Leu	Ala	Leu	Val	Gly	Ile	Asp	Ser	His	Gly

225					230					235					240
Lys	Leu	Ser	Val	Leu	Arg	Leu	Ser	Pro	Ser	Met	Gly	His	Pro	Leu	Glu
				245					250					255	
Val	Gly	Leu	Ala	Leu	Arg	His	Leu	Leu	Phe	Leu	Leu	Glu	Tyr	Cys	Met
				260					265					270	
Val	Thr	Gly	Tyr	Asp	Trp	Trp	Asp	Ile	Leu	Leu	His	Val	Gln	Pro	Ser
				275					280					285	
Met	Val	Gln	Ser	Leu	Val	Glu	Lys	Leu	His	Glu	Glu	Tyr	Thr	Arg	Gln
				290					295					300	
Thr	Ala	Ala	Leu	Gln	Gln	Val	Leu	Ser	Thr	Arg	Ile	Leu	Ala	Met	Lys
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Ala	Ser	Leu	Cys	Lys	Leu	Ser	Pro	Cys	Thr	Val	Thr	Arg	Val	Cys	Asp
				325					330					335	
Tyr	His	Thr	Lys	Leu	Phe	Leu	Ile	Ala	Ile	Ser	Ser	Thr	Leu	Lys	Ser
				340					345					350	
Leu	Leu	Arg	Pro	His	Phe	Leu	Asn	Thr	Pro	Asp	Lys	Ser	Pro	Gly	Asp
				355					360					365	
Arg	Leu	Thr	Glu	Ile	Cys	Thr	Lys	Ile	Thr	Asp	Val	Asp	Ile	Asp	Lys
				370					375					380	
Val	Met	Ile	Asn	Leu	Lys	Thr	Glu	Glu	Phe	Val	Leu	Asp	Met	Asn	Thr
385					390					395					400
Leu	Gln	Ala	Leu	Gln	Gln	Leu	Leu	Gln	Trp	Val	Gly	Asp	Phe	Val	Leu
				405					410					415	
Tyr	Leu	Leu	Ala	Ser	Leu	Pro	Asn	Gln	Gly	Ser	Leu	Leu	Arg	Pro	Gly
				420					425					430	
His	Ser	Phe	Leu	Arg	Asp	Gly	Thr	Ser	Leu	Gly	Met	Leu	Arg	Glu	Leu
				435					440					445	
Met	Val	Val	Ile	Arg	Ile	Trp	Gly	Leu	Leu	Lys	Pro	Ser	Cys	Leu	Pro
				450					455					460	
Val	Tyr	Thr	Ala	Thr	Ser	Asp	Thr	Gln	Asp	Ser	Met	Ser	Leu	Leu	Phe
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Arg	Leu	Leu	Thr	Lys	Leu	Trp	Ile	Cys	Cys	Arg	Asp	Glu	Gly	Pro	Ala
				485					490					495	
Ser	Glu	Pro	Asp	Glu	Ala	Leu	Val	Asp	Glu	Cys	Cys	Leu	Leu	Pro	Ser
				500					505					510	
Gln	Leu	Leu	Ile	Pro	Ser	Leu	Asp	Trp	Leu	Pro	Ala	Ser	Asp	Gly	Leu
				515					520					525	
Val	Ser	Arg	Leu	Gln	Pro	Lys	Gln	Pro	Leu	Arg	Leu	Gln	Phe	Gly	Arg
				530					535					540	
Ala	Pro	Thr	Leu	Pro	Gly	Ser	Ala	Ala	Thr	Leu	Gln	Leu	Asp	Gly	Leu
545					550					555					560
Ala	Arg	Ala	Pro	Gly	Gln	Pro	Lys	Ile	Asp	His	Leu	Arg	Arg	Leu	His
				565					570					575	
Leu	Gly	Ala	Cys	Pro	Thr	Glu	Glu	Cys	Lys	Ala	Cys	Thr	Arg	Cys	Gly
				580					585					590	
Cys	Val	Thr	Met	Leu	Lys	Ser	Pro	Asn	Arg	Thr	Thr	Ala	Val	Lys	Gln
				595					600					605	
Trp	Glu	Gln	Arg	Trp	Ile	Lys	Asn	Cys	Leu	Cys	Gly	Gly	Leu	Trp	Trp
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<211> 1660

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3473

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ccattaaacg agggttttct ttctagaatc tctggtctgc tgctgtgcag atggacctgc  
240  
cggcactgct gtcagaagtg ctacgagtcc agctgttgcc agtcaagtga ggatgaagtt  
300  
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360  
gacaaggatg gtgactctgt ccacacggcc agcgaagtcc cgctgacccc acggaccaat  
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540  
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600  
tataaccccg acgactatct caggaagttc gaaccccacc tgtactccct cgactccaac  
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1440  
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1500

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<210> 3474

<211> 474

<212> PRT

<213> Homo sapiens

<400> 3474

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			20					25					30		
Lys	Cys	Tyr	Glu	Ser	Ser	Cys	Cys	Gln	Ser	Ser	Glu	Asp	Glu	Val	Glu
			35				40					45			
Ile	Leu	Gly	Pro	Phe	Pro	Ala	Gln	Thr	Pro	Pro	Trp	Leu	Met	Ala	Ser
			50			55					60				
Arg	Ser	Ser	Asp	Lys	Asp	Gly	Asp	Ser	Val	His	Thr	Ala	Ser	Glu	Val
65				70					75					80	
Pro	Leu	Thr	Pro	Arg	Thr	Asn	Ser	Pro	Asp	Gly	Arg	Arg	Ser	Ser	Ser
				85					90					95	
Asp	Thr	Ser	Lys	Ser	Thr	Tyr	Ser	Leu	Thr	Arg	Arg	Ile	Ser	Ser	Leu
			100					105					110		
Glu	Ser	Arg	Arg	Pro	Ser	Ser	Pro	Leu	Ile	Asp	Ile	Lys	Pro	Ile	Glu
			115				120					125			
Phe	Gly	Val	Leu	Ser	Ala	Lys	Lys	Glu	Pro	Ile	Gln	Pro	Ser	Val	Leu
			130			135					140				
Arg	Arg	Thr	Tyr	Asn	Pro	Asp	Asp	Tyr	Phe	Arg	Lys	Phe	Glu	Pro	His
145				150					155					160	
Leu	Tyr	Ser	Leu	Asp	Ser	Asn	Ser	Asp	Asp	Val	Asp	Ser	Leu	Thr	Asp
				165				170						175	
Glu	Glu	Ile	Leu	Ser	Lys	Tyr	Gln	Leu	Gly	Met	Leu	His	Phe	Ser	Thr
			180					185					190		
Gln	Tyr	Asp	Leu	Leu	His	Asn	His	Leu	Thr	Val	Arg	Val	Ile	Glu	Ala
			195				200					205			
Arg	Asp	Leu	Pro	Pro	Pro	Ile	Ser	His	Asp	Gly	Ser	Arg	Gln	Asp	Met
			210			215					220				
Ala	His	Ser	Asn	Pro	Tyr	Val	Lys	Ile	Cys	Leu	Leu	Pro	Asp	Gln	Lys
225				230					235					240	
Asn	Ser	Lys	Gln	Thr	Gly	Val	Lys	Arg	Lys	Thr	Gln	Lys	Pro	Val	Phe
				245				250						255	
Glu	Glu	Arg	Tyr	Thr	Phe	Glu	Ile	Pro	Phe	Leu	Glu	Ala	Gln	Arg	Arg
			260					265					270		
Thr	Leu	Leu	Leu	Thr	Val	Val	Asp	Phe	Asp	Lys	Phe	Ser	Arg	His	Cys
			275				280					285			
Val	Ile	Gly	Lys	Val	Ser	Val	Pro	Leu	Cys	Glu	Val	Asp	Leu	Val	Lys
			290			295					300				
Gly	Gly	His	Trp	Trp	Lys	Ala	Leu	Ile	Pro	Ser	Ser	Gln	Asn	Glu	Val
305				310					315					320	
Glu	Leu	Gly	Glu	Leu	Leu	Leu	Ser	Leu	Asn	Tyr	Leu	Pro	Ser	Ala	Gly

325 330 335  
 Arg Leu Asn Val Asp Val Ile Arg Ala Lys Gln Leu Leu Gln Thr Asp  
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 Val Ser Gln Gly Ser Asp Pro Phe Val Lys Ile Gln Leu Val His Gly  
 355 360 365  
 Leu Lys Leu Val Lys Thr Lys Lys Thr Ser Phe Leu Arg Gly Thr Ile  
 370 375 380  
 Asp Pro Phe Tyr Asn Glu Ser Phe Ser Phe Lys Val Pro Gln Glu Glu  
 385 390 395 400  
 Leu Glu Asn Ala Ser Leu Val Phe Thr Val Phe Gly His Asn Met Lys  
 405 410 415  
 Ser Ser Asn Asp Phe Ile Gly Arg Ile Val Ile Gly Gln Tyr Ser Ser  
 420 425 430  
 Gly Pro Ser Glu Thr Asn His Trp Arg Arg Met Leu Asn Thr His Arg  
 435 440 445  
 Thr Ala Val Glu Gln Trp His Ser Leu Arg Ser Arg Ala Glu Cys Asp  
 450 455 460  
 Arg Val Ser Pro Ala Ser Leu Glu Val Thr  
 465 470

&lt;210&gt; 3475

&lt;211&gt; 514

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3475

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 120  
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 420  
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 514

&lt;210&gt; 3476

&lt;211&gt; 171

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3476

Thr Arg Leu Glu Gly Trp Phe Phe Cys Thr Pro Ala Arg Lys Leu Leu  
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 Trp Leu Val Leu Gln Pro Phe Phe Tyr Ser Leu Arg Pro Leu Cys Val

			20					25					30			
His	Pro	Lys	Ala	Val	Thr	Arg	Met	Glu	Val	Leu	Asn	Thr	Leu	Val	Gln	
		35					40					45				
Leu	Ala	Ala	Asp	Leu	Ala	Ile	Phe	Ala	Leu	Trp	Gly	Leu	Lys	Pro	Val	
	50					55					60					
Val	Tyr	Leu	Leu	Ala	Ser	Ser	Phe	Leu	Gly	Leu	Gly	Leu	His	Pro	Ile	
65					70						75				80	
Ser	Gly	His	Phe	Val	Ala	Glu	His	Tyr	Met	Phe	Leu	Lys	Gly	His	Glu	
				85					90					95		
Thr	Tyr	Ser	Tyr	Tyr	Gly	Pro	Leu	Asn	Trp	Ile	Thr	Phe	Asn	Val	Gly	
			100					105					110			
Tyr	His	Val	Glu	His	His	Asp	Phe	Pro	Ser	Ile	Pro	Gly	Tyr	Asn	Leu	
		115					120					125				
Pro	Leu	Val	Arg	Lys	Ile	Ala	Pro	Glu	Tyr	Tyr	Asp	His	Leu	Pro	Gln	
	130					135					140					
His	His	Ser	Trp	Val	Lys	Val	Leu	Trp	Asp	Phe	Val	Phe	Glu	Asp	Ser	
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Leu	Gly	Pro	Tyr	Ala	Arg	Val	Lys	Arg	Val	Tyr						
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<211> 356
<212> DNA
<213> Homo sapiens
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120
gtggcctttg actttgctgc ccgagagatg gctccaaata tggcagagtg ggaccagaag
180
gtaggcggtt ttcttgctgt tagacgttct aacaacagat gtctcaggca gacctttatc
240
tttgctctcc gataatgtaa ttgttaaata tctcctccac ttaccaactc ttactgcaag
300
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356

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<210> 3478
<211> 116
<212> PRT
<213> Homo sapiens
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Leu Ala Val Arg Val Gly Lys Trp Arg Arg His Leu Thr Ile Thr Leu
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Ser Gly Asp Lys Asp Lys Gly Leu Pro Glu Thr Ser Val Val Arg Thr
      35             40             45
Ser Lys His Lys Lys Asn Ala Tyr Leu Leu Val Pro Leu Cys His Ile
 50             55             60
Trp Ser His Leu Ser Gly Ser Lys Val Lys Gly His Phe Leu Lys Phe

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<211> 797
<212> DNA
<213> Homo sapiens
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<210> 3480
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<212> PRT
<213> Homo sapiens
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2648



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65	70	75
Lys Ile Phe Arg Asp Leu Ser Lys Pro Met Gly Ala Gln Thr Lys Glu		
85	90	95
Arg Lys Leu Lys Phe Ile Gln Arg Phe Lys Glu Val Glu Lys Thr Glu		
100	105	110
Gly Asp Met Thr Ala Gln Cys His Tyr Tyr Thr His Tyr Ser Ser Ala		
115	120	125
Ile Ile Val Ala Ser Tyr Leu Val Arg Met Pro Pro Phe Thr Gln Ala		
130	135	140
Phe Cys Ala Leu Gln Val Ser Cys Cys His Ser Leu Tyr Thr His Thr		
145	150	155
His Thr His Thr His Thr Tyr Ala Cys Ile Thr Arg Leu Arg Pro Val		
165	170	175
Leu Glu Gln Arg Gln Asp Ala Ser Ala Lys Asn Leu Val Ile Ser Gln		
180	185	190

&lt;210&gt; 3481

&lt;211&gt; 1794

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3481

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120
atgaggtcct gaccagaggg tcttctgcca atgcctccaa gtggtcacca cctcagctct
180
gcagaccctg cgggtgctggg agccaccatg gagagtaggt gctacggctg cgctgtcaag
240
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300
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360
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420
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480
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540
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720
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840

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&lt;210&gt; 3482

&lt;211&gt; 206

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3482

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Gly	Ala	Thr	Met	Glu	Ser	Arg	Cys	Tyr	Gly	Cys	Ala	Val	Lys	Phe	Thr
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Leu	Phe	Lys	Lys	Glu	Tyr	Gly	Cys	Lys	Asn	Cys	Gly	Arg	Xaa	Phe	Cys
		35					40					45			
Ser	Gly	Cys	Leu	Ser	Phe	Ser	Ala	Ala	Val	Pro	Arg	Thr	Gly	Asn	Thr
		50				55				60					
Gln	Gln	Lys	Val	Cys	Lys	Gln	Cys	His	Glu	Val	Leu	Thr	Arg	Gly	Ser
65				70					75					80	
Ser	Ala	Asn	Ala	Ser	Lys	Trp	Ser	Pro	Pro	Gln	Asn	Tyr	Lys	Lys	Arg
			85					90					95		
Val	Ala	Ala	Leu	Glu	Ala	Lys	Gln	Lys	Pro	Ser	Thr	Ser	Gln	Ser	Gln
		100					105						110		
Gly	Leu	Thr	Arg	Gln	Asp	Gln	Met	Ile	Ala	Glu	Arg	Leu	Ala	Arg	Leu

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<212> DNA
<213> Homo sapiens
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<211> 147
<212> PRT
<213> Homo sapiens
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2651

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 Pro Thr Arg  
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<210> 3485  
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 <212> DNA  
 <213> Homo sapiens

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 420  
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 720  
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 780  
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<210> 3486  
 <211> 117  
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 <213> Homo sapiens

<400> 3486  
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 Ile Pro Leu Ser Gly Arg Leu Asp Ser Asp Glu Gln Lys Ile Gln Asn  
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 Asp Ile Ile Asp Ile Leu Leu Thr Phe Thr Gln Gly Val Asn Glu Lys

35	40	45
Leu Thr Ile Ser Glu Glu Thr Leu Ala Asn Asn Thr Trp Ser Leu Met		
50	55	60
Leu Lys Glu Val Leu Ser Ser Ile Leu Lys Val Pro Glu Gly Phe Phe		
65	70	75
Ser Gly Leu Ile Leu Leu Ser Glu Leu Leu Pro Leu Pro Leu Pro Met		
85	90	95
Gln Thr Thr Gln Val Ser Leu Pro His Asn Met His Leu Ile Asn Asp		
100	105	110
Cys Ser Asn Thr Phe		
115		

&lt;210&gt; 3487

&lt;211&gt; 772

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3487

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540
tactacatcc caggcagtggt tctaggcact ggggagtcgg cagcgaacaa aacctgtctt
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660
tgttaatcat gaaacatttt gattttttta aaattttaac tacagtcaac cttaatttca
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772

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&lt;210&gt; 3488

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3488

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Trp Glu Ala Glu Ala Gly Gly Ser Arg Gly Gln Glu Ile Glu Thr Ser

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 Phe Asn Pro Val Thr Glu Ile Ser Ile Cys Thr  
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 <212> DNA  
 <213> Homo sapiens

<400> 3489  
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 <212> PRT  
 <213> Homo sapiens

<400> 3490  
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 35 40 45  
 Gly Ile Pro Cys Pro Asn Ser Cys His Ile His Ser His Trp Glu Ser  
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 <212> DNA  
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 480  
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 <211> 189  
 <212> PRT  
 <213> Homo sapiens

<400> 3492  
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 Gly Glu Lys Leu Asp Tyr Phe His Asn Gly Asn Pro Arg Tyr Thr Arg  
 35 40 45  
 Val Thr Ala Met Glu Tyr Leu Asn Gly Gln Asp Cys Ser Leu Leu Leu  
 50 55 60  
 Thr Ala Thr Asp Asp Gly Ala Ile Arg Val Trp Lys Asn Phe Ala Asp  
 65 70 75 80  
 Leu Glu Lys Asn Pro Glu Met Val Thr Ala Trp Gln Gly Leu Ser Asp  
 85 90 95  
 Met Leu Pro Thr Thr Arg Gly Ala Gly Met Val Val Asp Trp Glu Gln  
 100 105 110  
 Glu Thr Gly Leu Leu Met Ser Ser Gly Asp Val Arg Ile Val Arg Ile  
 115 120 125  
 Trp Asp Thr Asp Arg Glu Met Lys Val Gln Asp Ile Pro Thr Gly Ala  
 130 135 140  
 Asp Ser Cys Val Thr Ser Leu Ser Cys Asp Ser His Arg Ser Leu Ile  
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 Val Ala Gly Leu Gly Asp Gly Ser Ile Arg Val Tyr Asp Arg Arg Met  
 165 170 175  
 Ala Leu Ser Glu Cys Arg Val Met Thr Tyr Arg Glu His  
 180 185

<210> 3493  
 <211> 2244  
 <212> DNA  
 <213> Homo sapiens

<400> 3493  
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&lt;210&gt; 3494

&lt;211&gt; 628

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3494

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Gln	Pro	Ser	Asn	Lys	Glu	Leu	Phe	Gly	Asp	Asp	Ser	Glu	Asp	Glu	Gly	20	25	30	
Ala	Ser	His	His	Ser	Gly	Ser	Asp	Asn	His	Ser	Glu	Arg	Ser	Asp	Asn	35	40	45	
Arg	Ser	Glu	Ala	Ser	Glu	Arg	Ser	Asp	His	Glu	Asp	Asn	Asp	Pro	Ser	50	55	60	
Asp	Val	Asp	Gln	His	Ser	Gly	Ser	Glu	Ala	Pro	Asn	Asp	Asp	Glu	Asp	65	70	75	80
Glu	Gly	His	Arg	Ser	Asp	Gly	Gly	Ser	His	His	Ser	Glu	Ala	Glu	Gly	85	90	95	
Ser	Glu	Lys	Ala	His	Ser	Asp	Asp	Glu	Lys	Trp	Gly	Arg	Glu	Asp	Lys	100	105	110	
Ser	Asp	Gln	Ser	Asp	Asp	Glu	Lys	Ile	Gln	Asn	Ser	Asp	Asp	Glu	Glu	115	120	125	
Arg	Ala	Gln	Gly	Ser	Asp	Glu	Asp	Lys	Leu	Gln	Asn	Ser	Asp	Asp	Asp	130	135	140	
Glu	Lys	Met	Gln	Asn	Thr	Asp	Asp	Glu	Glu	Arg	Pro	Gln	Leu	Ser	Asp	145	150	155	160
Asp	Glu	Arg	Gln	Gln	Leu	Ser	Glu	Glu	Glu	Lys	Ala	Asn	Ser	Asp	Asp	165	170	175	
Glu	Arg	Pro	Val	Ala	Ser	Asp	Asn	Asp	Asp	Glu	Lys	Gln	Asn	Ser	Asp	180	185	190	
Asp	Glu	Glu	Gln	Pro	Gln	Leu	Ser	Asp	Glu	Glu	Lys	Met	Gln	Asn	Ser	195	200	205	
Asp	Asp	Glu	Arg	Pro	Gln	Ala	Pro	Asp	Glu	Glu	His	Arg	His	Ser	Asp				

210	215	220
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225	230	235
Ser Glu Asp Glu Val	Leu Arg Met Lys Arg	Lys Asn Ala Ile Ala Ser
245	250	255
Asp Ser Glu Ala Asp	Ser Asp Thr Glu Val	Pro Lys Asp Asn Ser Gly
260	265	270
Thr Met Asp Leu Phe	Gly Gly Ala Asp Asp	Ile Ser Ser Gly Ser Asp
275	280	285
Gly Glu Asp Lys Pro	Pro Thr Pro Gly Gln	Pro Val Asp Glu Asn Gly
290	295	300
Leu Pro Gln Asp Gln	Gln Glu Glu Glu Pro	Ile Pro Glu Thr Arg Ile
305	310	315
Glu Val Glu Ile Pro	Lys Val Asn Thr Asp	Leu Gly Asn Asp Leu Tyr
325	330	335
Phe Val Lys Leu Pro	Asn Phe Leu Ser Val	Glu Pro Arg Pro Phe Asp
340	345	350
Pro Gln Tyr Tyr Glu	Asp Glu Phe Glu Asp	Glu Glu Met Leu Asp Glu
355	360	365
Glu Gly Arg Thr Arg	Leu Lys Leu Lys Val	Glu Asn Thr Ile Arg Trp
370	375	380
Arg Ile Arg Arg Asp	Glu Glu Gly Asn Glu	Ile Lys Glu Ser Asn Ala
385	390	395
Arg Ile Val Lys Trp	Ser Asp Gly Ser Met	Ser Leu His Leu Gly Asn
405	410	415
Glu Val Phe Asp Val	Tyr Lys Ala Pro Leu	Gln Gly Asp His Asn His
420	425	430
Leu Phe Ile Arg Gln	Gly Thr Gly Leu Gln	Gly Gln Ala Val Phe Lys
435	440	445
Ala Lys Leu Thr Phe	Arg Pro His Ser Thr	Asp Ser Ala Thr His Arg
450	455	460
Lys Met Thr Leu Ser	Leu Ala Asp Arg Cys	Ser Lys Thr Gln Lys Ile
465	470	475
Arg Ile Leu Pro Met	Ala Gly Arg Asp Pro	Glu Cys Gln Arg Thr Glu
485	490	495
Met Ile Lys Lys Glu	Glu Glu Arg Leu Arg	Ala Ser Ile Arg Arg Glu
500	505	510
Ser Gln Gln Arg Arg	Met Arg Glu Lys Gln	His Gln Arg Gly Leu Ser
515	520	525
Ala Ser Tyr Leu Glu	Pro Asp Arg Tyr Asp	Glu Glu Glu Glu Gly Glu
530	535	540
Glu Ser Ile Ser Leu	Ala Ala Ile Lys Asn	Arg Tyr Lys Gly Gly Ile
545	550	555
Arg Glu Glu Arg Ala	Arg Ile Tyr Ser Ser	Asp Ser Asp Glu Gly Ser
565	570	575
Glu Glu Asp Lys Ala	Gln Arg Leu Leu Lys	Ala Lys Lys Leu Thr Ser
580	585	590
Asp Glu Glu Gly Glu	Pro Ser Gly Lys Arg	Lys Ala Glu Asp Asp Asp
595	600	605
Lys Ala Asn Lys Lys	His Lys Lys Tyr Val	Ile Ser Asp Glu Glu Glu
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Glu Asp Asp Asp		
625		

<210> 3495  
<211> 1085  
<212> DNA  
<213> Homo sapiens

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180  
aagaaccgg atgagggcga gaagtttaa ctcatatccc aggcataatga agtgctttca  
240  
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<210> 3496  
<211> 337  
<212> PRT  
<213> Homo sapiens

<400> 3496  
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Tyr His Pro Asp Lys Asn Pro Asp Glu Gly Glu Lys Phe Lys Leu Ile  
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 35 40 45  
 Ser Gln Ala Tyr Glu Val Leu Ser Asp Pro Lys Lys Arg Asp Val Tyr  
 50 55 60  
 Asp Gln Gly Gly Glu Gln Ala Ile Lys Glu Gly Gly Ser Gly Ser Pro  
 65 70 75 80  
 Ser Phe Ser Ser Pro Met Asp Ile Phe Asp Met Phe Phe Gly Gly Gly  
 85 90 95  
 Gly Arg Met Ala Arg Glu Arg Arg Gly Lys Asn Val Val His Gln Leu  
 100 105 110  
 Ser Val Thr Leu Glu Asp Leu Tyr Asn Gly Val Thr Lys Lys Leu Ala  
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 Leu Gln Lys Asn Val Ile Cys Glu Lys Cys Glu Gly Val Gly Gly Lys  
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 Lys Gly Ser Val Glu Lys Cys Pro Leu Cys Lys Gly Arg Gly Met Gln  
 145 150 155 160  
 Ile His Ile Gln Gln Ile Gly Pro Gly Met Val Gln Gln Ile Gln Thr  
 165 170 175  
 Val Cys Ile Glu Cys Lys Gly Gln Gly Glu Arg Ile Asn Pro Lys Asp  
 180 185 190  
 Arg Cys Glu Ser Cys Ser Gly Ala Lys Val Ile Arg Glu Lys Lys Ile  
 195 200 205  
 Ile Glu Val His Val Glu Lys Gly Met Lys Asp Gly Gln Lys Ile Leu  
 210 215 220  
 Phe His Gly Glu Gly Asp Gln Glu Pro Glu Leu Glu Pro Gly Asp Val  
 225 230 235 240  
 Ile Ile Val Leu Asp Gln Lys Asp His Ser Val Phe Gln Arg Arg Gly  
 245 250 255  
 His Asp Leu Ile Met Lys Met Lys Ile Gln Leu Ser Glu Ala Leu Cys  
 260 265 270  
 Gly Phe Lys Lys Thr Ile Lys Thr Leu Asp Asn Arg Ile Leu Val Ile  
 275 280 285  
 Thr Ser Lys Ala Gly Glu Val Ile Lys His Gly Asp Leu Arg Cys Val  
 290 295 300  
 Arg Asp Glu Gly Met Pro Ile Tyr Lys Ala Pro Leu Glu Lys Gly Ile  
 305 310 315 320  
 Leu Ile Ile Gln Phe Leu Val Ile Phe Pro Xaa Lys His Trp Leu Ser  
 325 330 335  
 Leu

&lt;210&gt; 3497

&lt;211&gt; 1638

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3497

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1638

&lt;210&gt; 3498

&lt;211&gt; 210

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens



&lt;400&gt; 3498

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 Cys Cys Cys Cys Ser Cys Ser Cys Leu Thr Val Arg Asn Glu Glu Arg  
 35 40 45  
 Gly Glu Asn Ala Gly Arg Pro Thr His Thr Thr Lys Met Glu Ser Ile  
 50 55 60  
 Gln Val Leu Glu Glu Cys Gln Asn Pro Thr Ala Glu Glu Val Leu Ser  
 65 70 75 80  
 Trp Ser Gln Asn Phe Asp Lys Met Met Lys Ala Pro Ala Gly Arg Asn  
 85 90 95  
 Leu Phe Arg Glu Phe Leu Arg Thr Glu Tyr Ser Glu Glu Asn Leu Leu  
 100 105 110  
 Phe Trp Leu Ala Cys Glu Asp Leu Lys Lys Glu Gln Asn Lys Lys Val  
 115 120 125  
 Ile Glu Glu Lys Ala Arg Met Ile Tyr Glu Asp Tyr Ile Ser Ile Leu  
 130 135 140  
 Ser Pro Lys Glu Val Ser Leu Asp Ser Arg Val Arg Glu Val Ile Asn  
 145 150 155 160  
 Arg Asn Leu Leu Asp Pro Asn Pro His Met Tyr Glu Asp Ala Gln Leu  
 165 170 175  
 Gln Ile Tyr Thr Leu Met His Arg Asp Ser Phe Pro Arg Phe Leu Asn  
 180 185 190  
 Ser Gln Ile Tyr Lys Ser Phe Val Glu Ser Thr Ala Gly Ser Ser Ser  
 195 200 205  
 Glu Ser  
 210

&lt;210&gt; 3499

&lt;211&gt; 732

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3499

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 180  
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600  
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<210> 3500  
<211> 168  
<212> PRT  
<213> Homo sapiens

<400> 3500  
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20 25 30  
Ala Ser Thr Gly Lys Gln Gly Ala Pro Gly Pro Asp Trp Ala Cys Ile  
35 40 45  
Phe His Val Val Leu Gln Pro Ser Arg His Gly Pro Glu Ala Thr Ala  
50 55 60  
Ala Pro Gln Ser Pro Pro Thr Pro Ala Val Pro Pro Gly His Gly Ala  
65 70 75 80  
His Asp Ser Gly Pro Gly Gln Arg Gln Arg Gln Gly Ala Gly Ser Thr  
85 90 95  
Pro Ala Arg Val Pro Val His Gly Ser Pro Ser Ser Cys Arg Ala Leu  
100 105 110  
Arg Pro Ala Gly Arg Ser Ser Arg Ala Ala Pro Arg Ala Ser Pro Ala  
115 120 125  
Gly Gln Ala Ser Ser Arg Pro Xaa Ser Gly Ala Met His Arg Leu Gly  
130 135 140  
Glu Gly Asn Arg Ala Gly Glu Lys Val Phe Arg Arg Thr Ala Val Gln  
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Lys Arg Arg Val Gly Gly Gly Thr  
165

<210> 3501  
<211> 691  
<212> DNA  
<213> Homo sapiens

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 691

<210> 3502

<211> 196

<212> PRT

<213> Homo sapiens

<400> 3502

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Glu	Ile	Lys	Leu	Tyr	Ala	Gln	Ile	Pro	Pro	Ile	Glu	Lys	Met	Asp	Ala	35	40	45	
Ser	Leu	Ser	Met	Leu	Ala	Asn	Cys	Glu	Lys	Leu	Ser	Leu	Ser	Thr	Asn	50	55	60	
Cys	Ile	Glu	Lys	Ile	Ala	Asn	Leu	Asn	Gly	Leu	Lys	Asn	Leu	Arg	Ile	65	70	75	80
Leu	Ser	Leu	Gly	Arg	Asn	Asn	Ile	Lys	Asn	Leu	Asn	Gly	Leu	Glu	Ala	85	90	95	
Val	Gly	Asp	Thr	Leu	Glu	Glu	Leu	Trp	Ile	Ser	Tyr	Asn	Phe	Ile	Glu	100	105	110	
Lys	Leu	Lys	Gly	Ile	His	Ile	Met	Lys	Lys	Leu	Lys	Ile	Leu	Tyr	Met	115	120	125	
Ser	Asn	Asn	Leu	Val	Lys	Asp	Trp	Ala	Glu	Phe	Val	Lys	Leu	Ala	Glu	130	135	140	
Leu	Pro	Cys	Leu	Glu	Asp	Leu	Val	Phe	Val	Gly	Asn	Pro	Leu	Glu	Glu	145	150	155	160
Lys	His	Ser	Ala	Glu	Asn	Asn	Trp	Ile	Glu	Glu	Ala	Thr	Lys	Arg	Val	165	170	175	
Pro	Lys	Leu	Lys	Lys	Leu	Asp	Gly	Thr	Pro	Val	Ile	Lys	Gly	Asp	Glu	180	185	190	
Glu	Glu	Asp	Asn													195			

<210> 3503

<211> 857

<212> DNA

<213> Homo sapiens

<400> 3503

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 180  
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 240  
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 360  
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 840  
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 857

&lt;210&gt; 3504

&lt;211&gt; 285

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3504

Ala	Ala	Pro	Arg	Trp	Ser	Ala	Ser	Gly	Pro	Trp	Ile	Arg	Gly	Asn	Gly
1				5					10					15	
Gln	Gly	Cys	Gly	Ser	Leu	Phe	Thr	Leu	Val	Ser	Lys	Pro	Phe	Cys	Ala
			20					25					30		
Ala	Ala	Ala	Ala	Ser	Thr	Ala	Ile	Asn	Ala	Gln	Arg	Leu	Ala	Glu	Lys
			35				40					45			
Leu	Arg	Ala	Gln	Lys	Arg	Glu	Gln	Asp	Thr	Lys	Lys	Glu	Pro	Val	Ser
	50				55						60				
Thr	Asn	Ala	Val	Gln	Arg	Arg	Val	Gln	Glu	Ile	Val	Arg	Phe	Thr	Arg
65				70					75					80	
Gln	Leu	Gln	Arg	Val	His	Pro	Asn	Val	Leu	Ala	Lys	Ala	Leu	Thr	Arg
			85					90					95		
Gly	Ile	Leu	His	Gln	Asp	Lys	Asn	Leu	Val	Val	Ile	Asn	Lys	Pro	Tyr
			100					105					110		
Gly	Leu	Pro	Val	His	Gly	Gly	Pro	Gly	Val	Gln	Leu	Cys	Ile	Thr	Asp
		115					120					125			
Val	Leu	Pro	Ile	Leu	Ala	Lys	Met	Leu	His	Gly	His	Lys	Ala	Glu	Pro

130	135	140
Leu His Leu Cys His Arg Leu Asp Lys Glu Thr Thr Gly Val Met Val		
145	150	155
Leu Ala Trp Asp Lys Asp Met Ala His Gln Val Gln Glu Leu Phe Arg		160
	165	170
Thr Arg Gln Val Val Lys Lys Tyr Trp Ala Ile Thr Val His Val Pro		175
	180	185
Met Pro Ser Ala Gly Val Val Asp Ile Pro Ile Val Glu Lys Glu Gly		190
	195	200
Gln Gly Gln Gln Gln His Pro Arg Met Thr Leu Ser Pro Ser Ser Arg		205
	210	215
Met Asp Asp Gly Lys Met Val Lys Val Arg Arg Ser Arg Asn Ala Gln		220
225	230	235
Val Ala Val Thr Gln Tyr Gln Val Leu Ser Ser Thr Leu Ser Ser Ala		240
	245	250
Leu Val Glu Leu Gln Pro Ile Thr Gly Ile Lys His Gln Leu Arg Val		255
	260	265
His Leu Ser Phe Gly Leu Asp Cys Pro Ile Leu Gly Asp		270
	275	280
		285

&lt;210&gt; 3505

&lt;211&gt; 1612

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3505

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480  
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 1560  
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 1612

&lt;210&gt; 3506

&lt;211&gt; 502

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3506

Val	His	Glu	Leu	His	Leu	Ser	Ala	Leu	Gln	Lys	Ala	Gln	Val	Ala	Leu
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Met	Thr	Leu	Thr	Leu	Phe	Pro	Val	Arg	Leu	Leu	Val	Ala	Ala	Ala	Met
				20				25						30	
Met	Leu	Leu	Ala	Trp	Pro	Leu	Ala	Leu	Val	Ala	Ser	Leu	Gly	Ser	Ala
				35				40						45	
Glu	Lys	Glu	Pro	Glu	Gln	Pro	Pro	Ala	Leu	Trp	Arg	Lys	Val	Val	Asp
				50				55						60	
Phe	Leu	Leu	Lys	Ala	Ile	Met	Arg	Thr	Met	Trp	Phe	Ala	Gly	Gly	Phe
65					70					75					80
His	Arg	Val	Ala	Val	Lys	Gly	Arg	Gln	Ala	Leu	Pro	Thr	Glu	Ala	Ala
				85					90					95	
Ile	Leu	Thr	Leu	Ala	Pro	His	Ser	Ser	Tyr	Phe	Asp	Ala	Ile	Pro	Val
				100					105					110	
Thr	Met	Thr	Met	Ser	Ser	Ile	Val	Met	Lys	Thr	Glu	Ser	Arg	Asp	Ile
				115				120						125	
Pro	Ile	Trp	Gly	Thr	Leu	Ile	Gln	Tyr	Ile	Arg	Pro	Val	Phe	Val	Ser
				130				135						140	
Arg	Ser	Asp	Gln	Asp	Ser	Arg	Arg	Lys	Thr	Val	Glu	Glu	Ile	Lys	Arg
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Arg	Ala	Gln	Ser	Asn	Gly	Lys	Trp	Pro	Gln	Ile	Met	Ile	Phe	Pro	Glu

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<211> 885
<212> DNA
<213> Homo sapiens
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120
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 660  
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 720  
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 780  
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 840  
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 885

&lt;210&gt; 3508

&lt;211&gt; 199

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3508

Leu	Arg	Thr	Leu	Leu	Asn	Leu	Leu	Phe	Leu	Pro	Asp	Gly	Leu	Cys	Gln
1			5					10						15	
Arg	Arg	Leu	Leu	Cys	Glu	Val	Ala	Ile	Ala	Val	Tyr	Thr	Phe	Gly	Thr
		20						25					30		
Cys	Ile	Ala	Phe	Leu	Ile	Ile	Ile	Gly	Asp	Gln	Gln	Asp	Lys	Ile	Ile
	35						40					45			
Ala	Val	Met	Ala	Lys	Glu	Pro	Glu	Gly	Ala	Ser	Gly	Pro	Trp	Tyr	Thr
	50					55					60				
Asp	Arg	Lys	Phe	Thr	Ile	Ser	Leu	Thr	Ala	Phe	Leu	Phe	Ile	Leu	Pro
65					70					75				80	
Leu	Ser	Ile	Pro	Arg	Glu	Ile	Gly	Phe	Gln	Lys	Tyr	Ala	Ser	Phe	Leu
			85						90					95	
Ser	Val	Val	Gly	Thr	Trp	Tyr	Val	Thr	Ala	Ile	Val	Ile	Ile	Lys	Tyr
		100						105					110		
Ile	Trp	Pro	Asp	Lys	Glu	Met	Thr	Pro	Gly	Asn	Ile	Leu	Thr	Arg	Pro
		115					120					125			
Ala	Ser	Trp	Met	Ala	Val	Phe	Asn	Ala	Met	Pro	Thr	Ile	Cys	Phe	Gly
	130					135					140				
Phe	Gln	Cys	His	Val	Ser	Ser	Val	Pro	Val	Phe	Asn	Ser	Met	Gln	Gln
145				150						155				160	
Pro	Glu	Val	Lys	Thr	Trp	Gly	Gly	Val	Val	Thr	Ala	Ala	Met	Val	Ile



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180 185 190  
Gly Ala Ala Val Asp Pro Asp  
195

<210> 3509  
<211> 331  
<212> DNA  
<213> Homo sapiens

<400> 3509  
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240  
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331

<210> 3510  
<211> 110  
<212> PRT  
<213> Homo sapiens

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Glu Gly Glu Leu Pro Thr His Glu Gln Val Phe Leu Ser Pro Pro Pro  
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Pro Leu Ser Pro Arg Gly Pro Gly Leu Pro Gln Lys Leu Glu Glu Arg  
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<212> DNA  
<213> Homo sapiens

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3319

&lt;210&gt; 3512

&lt;211&gt; 462

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3512

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Ser Gln Thr Cys Asp Trp Gly Asn Leu Leu Gln Asp Ile Ile Leu Gln  
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Cys Arg Asn Trp Asn Gln Val Phe His Met Pro Asp Leu Trp Arg Cys  
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Phe Glu Phe Glu Leu Asn Gln Pro Ala Thr Ser Tyr Leu Lys Ala Thr  
115 120 125  
His Pro Glu Leu Ile Lys Gln Ile Ile Lys Arg His Ser Asn His Leu  
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Gln Tyr Val Ser Phe Lys Val Asp Ser Ser Lys Glu Ser Ala Glu Ala  
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Ala Cys Asp Ile Leu Ser Gln Leu Val Asn Cys Ser Leu Lys Thr Leu  
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Gly Leu Ile Ser Thr Ala Arg Pro Ser Phe Met Asp Leu Pro Lys Ser  
180 185 190  
His Phe Ile Ser Ala Leu Thr Val Val Phe Val Asn Ser Lys Ser Leu  
195 200 205  
Ser Ser Leu Lys Ile Asp Asp Thr Pro Val Asp Asp Pro Ser Leu Lys  
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Ser Cys Pro His Val Ser Pro Ala Gly Ile Leu Cys Val Ala Asp Gln  
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Cys His Gly Leu Arg Glu Leu Ala Leu Asn Tyr His Leu Leu Ser Asp  
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Thr Ile Gln Lys Ser Ser Trp Asp Ala Phe Ile Arg His Ser Pro Lys  
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Val Asn Leu Val Met Tyr Phe Phe Leu Tyr Glu Glu Glu Phe Asp Pro  
325 330 335  
Phe Phe Arg Tyr Glu Ile Pro Ala Thr His Leu Tyr Phe Gly Arg Ser  
340 345 350  
Val Ser Lys Asp Val Leu Gly Arg Val Gly Met Thr Cys Pro Arg Leu

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	405	410
Cys Gly Gly Arg Leu Ser Gln Leu Ser Ile Met Glu Glu Val Leu Ile		415
	420	425
Pro Asp Gln Lys Tyr Ser Leu Glu Gln Ile His Trp Glu Val Ser Lys		430
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&lt;210&gt; 3513

&lt;211&gt; 2103

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3513

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&lt;211&gt; 484

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3514

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His	Thr	Gly	Glu	Lys	Pro	Tyr	Val	Cys	Ser	Val	Cys	Gly	Lys	Ala	Phe
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Ser	Gln	Ser	Ser	Val	Leu	Ser	Lys	His	Arg	Arg	Ile	His	Thr	Gly	Glu
				165					170					175	
Lys	Pro	Tyr	Glu	Cys	Asn	Glu	Cys	Gly	Lys	Ala	Phe	Arg	Val	Ser	Ser
			180					185					190		
Asp	Leu	Ala	Gln	His	His	Lys	Ile	His	Thr	Gly	Glu	Lys	Pro	His	Glu
	195						200					205			
Cys	Leu	Glu	Cys	Arg	Lys	Ala	Phe	Thr	Gln	Leu	Ser	His	Leu	Ile	Gln
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His	Gln	Arg	Ile	His	Thr	Gly	Glu	Arg	Pro	Tyr	Val	Cys	Pro	Leu	Cys
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His	Thr	Gly	Glu	Lys	Pro	His	Arg	Cys	Asn	Glu	Cys	Gly	Lys	Thr	Phe
		260					265						270		
Ser	Val	Lys	Arg	Thr	Leu	Leu	Gln	His	Gln	Arg	Ile	His	Thr	Gly	Glu
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Lys	Pro	Tyr	Thr	Cys	Ser	Glu	Cys	Gly	Lys	Ala	Phe	Ser	Asp	Arg	Ser
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Val	Leu	Ile	Gln	His	His	Asn	Val	His	Thr	Gly	Glu	Lys	Pro	Tyr	Glu
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Cys	Ser	Glu	Cys	Gly	Lys	Thr	Phe	Ser	His	Arg	Ser	Thr	Leu	Met	Asn
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Ser	Ala	Arg	Arg	Ser	Leu	Ile	Gln	His	Glu	Arg	Ile	His	Thr	Gly	Glu
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Lys	Pro	Phe	Gln	Cys	Thr	Glu	Cys	Gly	Lys	Ala	Xaa	Ser	Leu	Lys	Ala
				405					410					415	
Thr	Leu	Ile	Val	His	Leu	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Tyr	Glu
			420					425					430		
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His	Gln	Arg	Ile	His	Thr	Gly	Glu	Lys	Pro	Tyr	Glu	Cys	Gly	Glu	Cys
	450					455					460				
Gly	Arg	Ala	Phe	Asn	Gln	His	Gly	His	Leu	Ile	Gln	His	Gln	Lys	Val
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<211> 5003

<212> DNA

<213> Homo sapiens

<400> 3515

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<211> 547

<212> PRT

<213> Homo sapiens

<400> 3516

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Ile	Met	Asp	Gln	Tyr	Lys	Phe	Tyr	Asp	Pro	Ser	Pro	Pro	Arg	Arg	Arg
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Gly	Asn	Trp	Ile	Thr	Leu	Lys	Met	Arg	Lys	Leu	Ile	Lys	Ser	Lys	Lys
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Asp	Ile	Asn	Arg	Glu	Arg	Gln	Lys	Ser	Leu	Thr	Leu	Thr	Pro	Thr	Arg
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Ser	Asp	Ser	Ser	Glu	Gly	Phe	Leu	Gln	Leu	Pro	His	Gln	Asp	Ser	Gln
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Asp	Ser	Ser	Ser	Val	Gly	Ser	Asn	Ser	Leu	Glu	Asp	Gly	Gln	Thr	Leu
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Gly	Thr	Lys	Lys	Ser	Ser	Thr	Met	Asn	Asp	Leu	Val	Gln	Ser	Met	Val
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His	Ala	Ser	Arg	Pro	Ala	Ser	Leu	Asp	Ser	Gly	Arg	Thr	Ser	Thr	Ser
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Asn	Ser	Asn	Asn	Asn	Ala	Ser	Leu	His	Glu	Val	Lys	Ala	Gly	Ala	Val

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Tyr Leu Lys Arg Gln Thr Arg Ser Ser Pro Val Leu Gln His Lys Ile		
325	330	335
Ser Glu Thr Leu Glu Ser Arg His His Lys Ile Lys Thr Gly Ser Pro		
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Gly Ser Glu Val Val Thr Leu Gln Gln Phe Leu Glu Glu Ser Asn Lys		
355	360	365
Leu Thr Ser Val Gln Ile Lys Ser Ser Ser Gln Glu Asn Leu Leu Asp		
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Glu Val Met Lys Ser Leu Ser Val Ser Ser Asp Phe Leu Gly Lys Asp		
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Gly Asp Phe Tyr Asp Arg Arg Thr Thr Lys Pro Glu Phe Leu Arg Pro		
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Gly Pro Arg Lys Thr Glu Asp Thr Tyr Phe Ile Ser Ser Ala Gly Lys		
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Ile His Asp Phe Leu Thr Lys Asp Ser Arg Leu Pro Ile Ser Val Asp		
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Gln Ser Ser		
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&lt;210&gt; 3517

&lt;211&gt; 342

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3517

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 <212> PRT  
 <213> Homo sapiens

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 <213> Homo sapiens

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&lt;210&gt; 3520

&lt;211&gt; 303

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens



&lt;400&gt; 3520

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 Arg Glu Glu Leu Ala Arg Ile Gly Leu Val Pro Pro Pro Glu Glu Phe  
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 65 70 75 80  
 Pro Thr Thr Val Pro Ser Pro Ala Ser Gly Lys Pro Ser Ser Glu Pro  
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 Pro Pro Ala Pro Glu Ser Ala Ala Asp Ser Gly Val Glu Glu Ala Asp  
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 115 120 125  
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 Asp Thr His Thr Ser Phe Ala Asp Gly His Thr Phe Leu Leu Glu Lys  
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 Pro Pro Val Pro Pro Lys Pro Lys Leu Lys Ser Pro Leu Gly Lys Gly  
 165 170 175  
 Pro Val Thr Phe Arg Asp Pro Leu Leu Lys Gln Ser Ser Asp Ser Glu  
 180 185 190  
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 195 200 205  
 Ala Gly Pro Ala Arg Pro Arg Tyr Leu Phe Gln Arg Arg Ser Lys Leu  
 210 215 220  
 Trp Gly Asp Pro Val Glu Ser Arg Gly Leu Pro Gly Pro Glu Asp Asp  
 225 230 235 240  
 Lys Pro Thr Val Ile Ser Glu Leu Ser Ser Arg Leu Gln Gln Leu Asn  
 245 250 255  
 Lys Asp Thr Arg Ser Leu Gly Glu Glu Pro Val Gly Gly Leu Gly Ser  
 260 265 270  
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&lt;210&gt; 3521

&lt;211&gt; 638

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3521

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<210> 3522  
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 <212> PRT  
 <213> Homo sapiens

<400> 3522  
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 Gln His Ala Asp Gln Gly Pro Pro Gly Pro His Leu Asp Leu His Gln  
 35 40 45  
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 Leu Arg Cys Gly Leu Pro Ser Glu Gln Arg Ala Ala Gly Glu Ala Arg  
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 Gly Leu His Leu Leu Gln Asp Pro Thr Pro Gly Arg Leu Cys Gln Ala  
 85 90 95  
 Pro Ala Gly Pro Pro Gly Gly Gly His Gly Pro Ala Gly Arg Gly Gln  
 100 105 110  
 Pro Ser Arg His Arg Pro Gly Glu Pro Gln Gly Gly Arg Gly Gly Xaa  
 115 120 125  
 Pro Asp Pro Ser Thr Pro Ser Val Arg Gly Ser Gln Arg Thr Ala Ser  
 130 135 140  
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<210> 3523  
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&lt;210&gt; 3524

&lt;211&gt; 444

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3524

Met	Ala	Pro	Asp	Pro	Leu	Ala	Ala	Glu	Thr	Ala	Ala	Gln	Gly	Leu	Thr
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Pro	Arg	Tyr	Phe	Thr	Trp	Asp	Glu	Val	Ala	Gln	Arg	Ser	Gly	Cys	Glu
			20					25					30		
Glu	Arg	Trp	Leu	Val	Ile	Asp	Arg	Lys	Val	Tyr	Asn	Ile	Ser	Asp	Phe
		35					40				45				
Ser	Arg	Arg	His	Pro	Gly	Gly	Ser	Arg	Val	Ile	Ser	His	Tyr	Ala	Gly
	50					55					60				
Gln	Asp	Ala	Thr	Asp	Pro	Phe	Val	Ala	Phe	His	Ile	Asn	Lys	Gly	Leu
65					70					75					80
Val	Lys	Lys	Tyr	Met	Asn	Ser	Leu	Leu	Ile	Gly	Glu	Leu	Ser	Pro	Glu
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Gln	Pro	Ser	Phe	Glu	Pro	Thr	Lys	Asn	Lys	Glu	Leu	Thr	Asp	Glu	Phe
			100					105					110		
Arg	Glu	Leu	Arg	Ala	Thr	Val	Glu	Arg	Met	Gly	Leu	Met	Lys	Ala	Asn

115	120	125
His Val Phe Phe Leu Leu Tyr	Leu Leu His Ile Leu Leu Leu Asp Gly	
130	135	140
Ala Ala Trp Leu Thr Leu Trp Val Phe Gly Thr Ser Phe Leu Pro Phe		
145	150	155
Leu Leu Cys Ala Val Leu Leu Ser Ala Val Gln Ala Gln Ala Gly Trp		
165	170	175
Leu Gln His Asp Phe Gly His Leu Ser Val Phe Ser Thr Ser Lys Trp		
180	185	190
Asn His Leu Leu His His Phe Val Ile Gly His Leu Lys Gly Ala Pro		
195	200	205
Ala Ser Trp Trp Asn His Met His Phe Gln His His Ala Lys Pro Asn		
210	215	220
Cys Phe Arg Lys Asp Pro Asp Ile Asn Met His Pro Phe Phe Phe Ala		
225	230	235
Leu Gly Lys Ile Leu Ser Val Glu Leu Gly Lys Gln Lys Lys Lys Tyr		
245	250	255
Met Pro Tyr Asn His Gln His Lys Tyr Phe Phe Leu Ile Gly Pro Pro		
260	265	270
Ala Leu Leu Pro Leu Tyr Phe Gln Trp Tyr Ile Phe Tyr Phe Val Ile		
275	280	285
Gln Arg Lys Lys Trp Val Asp Leu Val Trp Met Ile Thr Phe Tyr Val		
290	295	300
Arg Phe Phe Leu Thr Tyr Val Pro Leu Leu Gly Leu Lys Ala Phe Leu		
305	310	315
Gly Leu Phe Phe Ile Val Arg Phe Leu Glu Ser Asn Trp Phe Val Trp		
325	330	335
Val Thr Gln Met Asn His Ile Pro Met His Ile Asp His Asp Arg Asn		
340	345	350
Met Asp Trp Val Ser Thr Gln Leu Gln Ala Thr Cys Asn Val His Lys		
355	360	365
Ser Ala Phe Asn Asp Trp Phe Ser Gly His Leu Asn Phe Gln Ile Glu		
370	375	380
His His Leu Phe Pro Thr Met Pro Arg His Asn Tyr His Lys Val Ala		
385	390	395
Pro Leu Val Gln Ser Leu Cys Ala Lys His Gly Ile Glu Tyr Gln Ser		
405	410	415
Lys Pro Leu Leu Ser Ala Phe Ala Asp Ile Ile His Ser Leu Lys Glu		
420	425	430
Ser Gly Gln Leu Trp Leu Asp Ala Tyr Leu His Gln		
435	440	

&lt;210&gt; 3525

&lt;211&gt; 1116

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3525

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 1116

&lt;210&gt; 3526

&lt;211&gt; 304

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3526

Ile	Thr	Asp	Glu	Lys	Arg	Ile	Phe	Phe	Tyr	Ile	Val	Ala	Val	Ala	Asp
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Ala	Lys	Lys	Ser	Arg	Glu	Phe	Asn	Pro	Asn	Asn	Ser	Thr	Ala	Val	Leu
			20					25					30		
Arg	Lys	Gly	Ile	Cys	Glu	Tyr	His	Leu	Lys	Asn	Tyr	Ala	Ala	Ala	Leu
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Glu	Thr	Phe	Ile	Gly	Gly	Gln	Lys	Leu	Xaa	Ala	Asp	Ala	Asn	Phe	Ser
	50					55					60				
Asp	Trp	Ile	Lys	Arg	Cys	Gln	Glu	Ala	Gln	Asn	Gly	Ser	Glu	Ser	Glu
65				70						75				80	
Val	Val	Met	Glu	Pro	Ala	Leu	Glu	Gly	Thr	Gly	Lys	Glu	Gly	Lys	Lys
			85					90					95		
Ala	Ser	Ser	Arg	Lys	Arg	Thr	Leu	Ala	Glu	Pro	Pro	Ala	Lys	Gly	Leu
			100					105					110		
Leu	Gln	Pro	Val	Lys	Leu	Ser	Arg	Ala	Glu	Leu	Tyr	Lys	Glu	Pro	Thr



115	120	125
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130	135	140
Ser Leu Leu Arg Leu Gln Val Glu Glu Leu Leu Lys Glu Val Arg Leu		
145	150	155
Ser Glu Lys Lys Lys Asp Arg Ile Asp Ala Phe Leu Arg Glu Val Asn		
165	170	175
Gln Arg Val Val Arg Val Pro Ser Val Pro Glu Thr Glu Leu Thr Asp		
180	185	190
Gln Ala Trp Leu Pro Ala Gly Val Arg Val Pro Leu His Gln Val Pro		
195	200	205
Tyr Ala Val Lys Gly Cys Phe Arg Phe Leu Pro Pro Ala Gln Val Thr		
210	215	220
Val Val Gly Ser Tyr Leu Leu Gly Thr Cys Ile Arg Pro Asp Ile Asn		
225	230	235
Val Asp Val Ala Leu Thr Met Pro Arg Glu Ile Leu Gln Asp Lys Asp		
245	250	255
Gly Leu Asn Gln Arg Tyr Phe Arg Lys Arg Ala Leu Tyr Leu Ala His		
260	265	270
Leu Ala His His Leu Ala Gln Asp Pro Leu Phe Gly Ser Val Cys Phe		
275	280	285
Ser Tyr Thr Asn Gly Cys His Leu Lys Pro Ser Leu Leu Leu Arg Pro		
290	295	300

&lt;210&gt; 3527

&lt;211&gt; 2838

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3527

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720



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&lt;210&gt; 3528

&lt;211&gt; 281

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3528

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Leu	Phe	Phe	Ser	Cys	Ser	Pro	Arg	Gly	Pro	Pro	Gly	Pro	Arg	Gly	Arg
			20					25					30		
Pro	Gly	Pro	Pro	Gly	Pro	Pro	Gly	Gly	Pro	Ile	Gln	Leu	Gln	Gln	Asp
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Asp	Leu	Gly	Ala	Ala	Phe	Gln	Thr	Trp	Met	Asp	Thr	Ser	Gly	Ala	Leu
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Arg	Pro	Glu	Ser	Tyr	Ser	Tyr	Pro	Asp	Arg	Leu	Val	Leu	Asp	Gln	Gly
65				70				75						80	
Gly	Glu	Ile	Phe	Lys	Thr	Leu	His	Tyr	Leu	Ser	Asn	Leu	Ile	Gln	Ser
			85					90						95	
Ile	Lys	Thr	Pro	Leu	Gly	Thr	Lys	Glu	Asn	Pro	Ala	Arg	Val	Cys	Arg
			100					105					110		
Asp	Leu	Met	Asp	Cys	Glu	Gln	Lys	Met	Val	Asp	Gly	Thr	Tyr	Trp	Val
		115				120						125			
Asp	Pro	Asn	Leu	Gly	Cys	Ser	Ser	Asp	Thr	Ile	Glu	Val	Ser	Cys	Asn
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Phe	Thr	His	Gly	Gly	Gln	Thr	Cys	Leu	Lys	Pro	Ile	Thr	Ala	Ser	Lys
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			165					170						175	
Ser	Ser	Glu	Val	Thr	Gln	His	Ile	Thr	Ile	His	Cys	Leu	Asn	Met	Thr
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Val	Trp	Gln	Glu	Gly	Thr	Gly	Gln	Thr	Pro	Ala	Lys	Gln	Ala	Val	Arg
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Phe	Arg	Ala	Trp	Asn	Gly	Gln	Ile	Phe	Glu	Ala	Gly	Gly	Gln	Phe	Arg
	210				215						220				
Pro	Glu	Val	Ser	Met	Asp	Gly	Cys	Lys	Val	Gln	Asp	Gly	Arg	Trp	His

225		230		235		240
Gln Thr Leu Phe Thr Phe Arg Thr Gln Asp Pro Gln Gln Leu Pro Ile						
		245		250		255
Ile Ser Val Asp Asn Leu Pro Pro Ala Ser Ser Gly Lys Gln Tyr Arg						
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&lt;210&gt; 3529

&lt;211&gt; 3026

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3529

```

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 Gly Ser Leu Arg Leu Gly Leu Thr Thr Leu Ala Pro Gly Glu Met Gly  
 100 105 110  
 Pro Gly Ala Gly Gly Gly Gly Pro Gly Leu Pro Pro Ser Leu Pro Glu  
 115 120 125  
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 130 135 140  
 Asp Gly Gln Leu Gln Arg Met Asn Tyr Gly Arg Asn Leu Glu Arg Leu  
 145 150 155 160  
 Gly Val Lys Trp Leu Ala Pro Gly Thr Gly Glu Gly Leu Gly Val Glu  
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 195 200 205

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 <212> DNA  
 <213> Homo sapiens

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 180

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 480  
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 780  
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&lt;210&gt; 3532

&lt;211&gt; 254

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3532

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Tyr	Ser	His	Asp	Gly	Thr	Asp	Ser	Pro	Pro	Asp	Ala	Asp	Glu	Val	Val
			20					25					30		
Ile	Val	Leu	Asn	Asn	Phe	Lys	Ser	Lys	Ile	Ile	Lys	Val	Lys	Val	Gln
		35					40					45			
Lys	Lys	Ala	Asp	Met	Val	Asn	Glu	Asp	Leu	Leu	Ser	Asp	Gly	Thr	Ser
		50				55					60				
Glu	Asn	Glu	Ser	Gly	Phe	Trp	Asp	Ser	Phe	Lys	Trp	Gly	Phe	Thr	Gly
65					70					75				80	
Gln	Lys	Thr	Glu	Glu	Val	Lys	Gln	Asp	Lys	Asp	Asp	Ile	Ile	Asn	Ile
			85						90					95	
Phe	Ser	Val	Ala	Ser	Gly	His	Leu	Tyr	Glu	Arg	Phe	Leu	Arg	Ile	Met
			100					105					110		
Met	Leu	Ser	Val	Leu	Lys	Asn	Thr	Lys	Thr	Pro	Val	Lys	Phe	Trp	Phe
		115					120					125			
Leu	Lys	Asn	Tyr	Leu	Ser	Pro	Thr	Phe	Lys	Glu	Phe	Ile	Pro	Tyr	Met
		130				135					140				
Ala	Asn	Glu	Tyr	Asn	Phe	Gln	Tyr	Glu	Leu	Val	Gln	Tyr	Lys	Trp	Pro
145					150					155				160	
Arg	Trp	Leu	His	Gln	Gln	Thr	Glu	Lys	Gln	Arg	Ile	Ile	Trp	Gly	Tyr
			165					170						175	
Lys	Ile	Leu	Phe	Leu	Asp	Val	Leu	Phe	Pro	Leu	Val	Val	Asp	Lys	Phe



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<400> 3533
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120
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180
cagtggacgc accccaactc catggataac ttgcccagtg ccgcttcccc cctggagcag
240
aaccctagca agcatgggtgc tatccctgga ggtctaagca ttgggcctcc aggtaagtcc
300
tccattgatg actcctatgg ccggtacgat ttaatccaga acagtgagtc accagccagt
360
cctcccgtag ctgttcccca tagctgggtca cgtgccaaat ctgacagtga taaaatctca
420
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480
cagaatattg accctgagaa tgaccctgac gtcactcctg gcagtgtccc cactgggcct
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accatcaaca ccaccatcca ggatgtcaac cgctacctcc tcaagagtgg agggtcctcc
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ccgccatcat ctcagaatgc cacgctgcct tcttcgagtg cctggccact cagtgcctcc
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720
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780
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900
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1140

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1151

<210> 3534  
<211> 313  
<212> PRT  
<213> Homo sapiens

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Met Asp Asn Leu Pro Ser Ala Ala Ser Pro Leu Glu Gln Asn Pro Ser  
35 40 45  
Lys His Gly Ala Ile Pro Gly Gly Leu Ser Ile Gly Pro Pro Gly Lys  
50 55 60  
Ser Ser Ile Asp Asp Ser Tyr Gly Arg Tyr Asp Leu Ile Gln Asn Ser  
65 70 75 80  
Glu Ser Pro Ala Ser Pro Pro Val Ala Val Pro His Ser Trp Ser Arg  
85 90 95  
Ala Lys Ser Asp Ser Asp Lys Ile Ser Asn Gly Ser Ser Ile Asn Trp  
100 105 110  
Pro Pro Glu Phe His Pro Gly Val Pro Trp Lys Gly Leu Gln Asn Ile  
115 120 125  
Asp Pro Glu Asn Asp Pro Asp Val Thr Pro Gly Ser Val Pro Thr Gly  
130 135 140  
Pro Thr Ile Asn Thr Thr Ile Gln Asp Val Asn Arg Tyr Leu Leu Lys  
145 150 155 160  
Ser Gly Gly Ser Ser Pro Pro Ser Ser Gln Asn Ala Thr Leu Pro Ser  
165 170 175  
Ser Ser Ala Trp Pro Leu Ser Ala Ser Gly Tyr Ser Ser Ser Phe Ser  
180 185 190  
Ser Ile Ala Ser Ala Pro Ser Val Ala Gly Lys Leu Ser Asp Ile Lys  
195 200 205  
Ser Thr Trp Ser Ser Gly Pro Thr Ser His Thr Gln Ala Ser Leu Ser  
210 215 220  
His Glu Leu Trp Lys Val Pro Arg Asn Ser Thr Ala Pro Thr Arg Pro  
225 230 235 240  
Pro Pro Gly Leu Thr Asn Pro Lys Pro Ser Ser Thr Trp Gly Ala Ser  
245 250 255  
Pro Leu Gly Trp Thr Ser Ser Tyr Ser Ser Gly Ser Ala Trp Ser Thr  
260 265 270  
Asp Thr Ser Gly Arg Thr Ser Ser Trp Leu Val Leu Arg Asn Leu Thr  
275 280 285  
Pro Gln Val Gln Tyr Gly Ala Pro Ala Ser Leu Ser Met Ile Gln Gly  
290 295 300  
Gly Phe Pro Leu Gly Pro Gln Cys Arg  
305 310

<210> 3535  
<211> 723  
<212> DNA  
<213> Homo sapiens

&lt;400&gt; 3535

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 120  
 cggcagacct gctacaggtt ctctctgctg gtgaccaccc accccacaac cactcaagaa  
 180  
 gcctcatcaa aacattgttg gagaaaactg ggtgcccacg gaggagaaac ggaatgcaag  
 240  
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 300  
 aagatcagct tagagaagaa gtggtccaga gagtttctct tctccttctc tattacatta  
 360  
 ttcacagga agagatctgt tcttcaaagc tcaacatgag taataaagag tataaatttt  
 420  
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 480  
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 540  
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 600  
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 660  
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 720  
 gta  
 723

&lt;210&gt; 3536

&lt;211&gt; 163

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3536

Met	Gln	Gly	Asp	Cys	Asn	Leu	Cys	Phe	Glu	Pro	Asp	Ala	Leu	Leu	Leu
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Ile	Ala	Gly	Gly	Asn	Phe	Glu	Asp	Gln	Leu	Arg	Glu	Glu	Val	Val	Gln
			20					25					30		
Arg	Val	Ser	Leu	Leu	Leu	Leu	Tyr	Tyr	Ile	Ile	His	Gln	Glu	Glu	Ile
		35					40					45			
Cys	Ser	Ser	Lys	Leu	Asn	Met	Ser	Asn	Lys	Glu	Tyr	Lys	Phe	Tyr	Leu
	50					55					60				
His	Ser	Leu	Leu	Ser	Leu	Arg	Gln	Asp	Glu	Asp	Ser	Ser	Phe	Leu	Ser
65					70					75				80	
Gln	Asn	Glu	Thr	Glu	Asp	Ile	Leu	Ala	Phe	Thr	Arg	Gln	Tyr	Phe	Asp
			85						90					95	
Thr	Ser	Gln	Ser	Gln	Cys	Met	Glu	Thr	Lys	Thr	Leu	Gln	Lys	Lys	Ser
		100						105					110		
Gly	Ile	Val	Ser	Ser	Glu	Gly	Ala	Asn	Glu	Ser	Thr	Leu	Pro	Gln	Leu
	115						120					125			
Ala	Ala	Met	Ile	Ile	Thr	Leu	Ser	Leu	Gln	Gly	Val	Cys	Leu	Gly	Gln
	130					135					140				
Gly	Asn	Leu	Pro	Ser	Pro	Asp	Tyr	Phe	Thr	Glu	Tyr	Ile	Phe	Ser	Ser

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Leu Asn Arg

150

155

160

<210> 3537  
<211> 714  
<212> DNA  
<213> Homo sapiens

<400> 3537  
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120  
cataaggcca agagtaagtg cgtgaatgca cttaagacaa agtcaggaca cgagcttcac  
180  
atgacaggcc ccgcgtgggc gaccagccag ccctggggac gggcacgcca cgccacacac  
240  
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300  
gcacctcaag gctgggggag gggcaggggc agggaggagc cgtgggggtgt ccctgggtgg  
360  
gtggagaggg cagcatgtga gaggcaaagt tgcaccaaca ctgggcgtga gacgtgagca  
420  
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480  
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540  
gcctgaatcc aggggctacc ccctgtccgg ctgtggccct cggtcctgca gggttggaag  
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<210> 3538  
<211> 154  
<212> PRT  
<213> Homo sapiens

<400> 3538  
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20 25 30  
Leu Lys Asp Pro Ser Ser Asn Pro Ala Gly Pro Arg Ala Thr Ala Gly  
35 40 45  
Gln Gly Val Ala Pro Gly Phe Arg His Ala Thr Thr Thr Arg Ala Arg  
50 55 60  
Ala Thr His Ala Ser Cys Ala His Leu Thr His Thr Pro Leu Pro Gly  
65 70 75 80  
His Ala Asp Thr Pro Gln Pro His Thr Ser His Ala Val His Leu Arg  
85 90 95  
Leu Leu Thr Ser His Ala Gln Cys Trp Cys Thr Phe Ala Ser His Met

	100		105		110										
Leu	Pro	Ser	Pro	Pro	Thr	Gln	Gly	His	Pro	Thr	Ala	Pro	Pro	Cys	Pro
	115		120		125										
Cys	Pro	Ser	Pro	Ser	Leu	Glu	Val	Pro	Cys	Pro	Ala	Gly	Pro	Val	Asn
	130		135		140										
Met	Gln	Trp	Glu	Ser	Gln	Ala	Val	Gln	Trp						
145			150												

<210> 3539  
 <211> 818  
 <212> DNA  
 <213> Homo sapiens

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 120  
 cggggggcgg aggttgcagt gagccgagat cgcgccaggta cgctccagtc tgggcgacaa  
 180  
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 240  
 cccctaccac agcacttcag agaagcaggt ctttaatcag tgtgtctaga tgcagctgct  
 300  
 gactgtcacc cctaccccg cttctctcca gtctgcggac ggccagtcac cccattgcc  
 360  
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 420  
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 720  
 cccgataatg agaccctcta ccgcagcggc ttgttgggct acgtcagtggt gtttggcatg  
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<210> 3540  
 <211> 180  
 <212> PRT  
 <213> Homo sapiens

<400> 3540  
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 20 25 30  
 Thr Leu Gly Ser Ser Arg Ala Lys Leu Gly Asn Phe Pro Trp Gln Ala

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<210> 3541
<211> 722
<212> DNA
<213> Homo sapiens
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<210> 3542

<211> 153  
 <212> PRT  
 <213> Homo sapiens

<400> 3542  
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                   20                  25                  30  
 Gln Ala Gly Asp Phe Glu Ala Ala Glu Arg His Cys Met Gln Leu Trp  
           35                  40                  45  
 Arg Gln Glu Pro Asp Asn Thr Gly Val Leu Leu Leu Leu Ser Ser Ile  
       50                  55                  60  
 His Phe Gln Cys Arg Arg Leu Asp Arg Ser Ala His Phe Ser Thr Leu  
   65                  70                  75                  80  
 Ala Ile Lys Gln Asn Pro Leu Leu Ala Glu Ala Tyr Ser Asn Leu Gly  
                   85                  90                  95  
 Asn Val Tyr Lys Glu Arg Gly Gln Leu Gln Glu Ala Ile Glu His Tyr  
                   100                  105                  110  
 Arg His Ala Leu Arg Leu Lys Pro Asp Phe Ile Asp Gly Tyr Ile Asn  
           115                  120                  125  
 Ala Ala Ala Ala Leu Val Ala Ala Gly Asp Met Glu Gly Ala Val Gln  
       130                  135                  140  
 Ala Tyr Val Ser Ala Leu Gln Pro Gly  
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<210> 3543  
 <211> 1206  
 <212> DNA  
 <213> Homo sapiens

<400> 3543  
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   120  
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   180  
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   300  
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   420  
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   480  
 cctcactatg aagaaggaca tattccaggc atattaataa taatattcta tggcatttcc  
   540  
 atattctgtc tggttgcctt agtgagggcc tccataactg atccaggaag actccctgag  
   600  
 aacccaaga tcccacatgg agaaaggag ttctgggaat tatgtaacaa gtgtaatttg  
   660

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 720  
 catcactgtc catggattaa caattgtgtt ggtgaagata atcattggct ctttctgcag  
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 gccataatga gactagcagc ctttatgggc attactatgt tagttggaat aactggactc  
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 1020  
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 1080  
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<210> 3544

<211> 273

<212> PRT

<213> Homo sapiens

<400> 3544

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			20					25					30		
Lys	Ile	Val	Leu	Phe	Pro	His	Tyr	Glu	Glu	Gly	His	Ile	Pro	Gly	Ile
		35					40					45			
Leu	Ile	Ile	Ile	Phe	Tyr	Gly	Ile	Ser	Ile	Phe	Cys	Leu	Val	Ala	Leu
	50					55					60				
Val	Arg	Ala	Ser	Ile	Thr	Asp	Pro	Gly	Arg	Leu	Pro	Glu	Asn	Pro	Lys
65					70				75						80
Ile	Pro	His	Gly	Glu	Arg	Glu	Phe	Trp	Glu	Leu	Cys	Asn	Lys	Cys	Asn
			85					90						95	
Leu	Met	Arg	Pro	Lys	Arg	Ser	His	His	Cys	Ser	Arg	Cys	Gly	His	Cys
			100					105						110	
Val	Arg	Arg	Met	Asp	His	His	Cys	Pro	Trp	Ile	Asn	Asn	Cys	Val	Gly
			115				120						125		
Glu	Asp	Asn	His	Trp	Leu	Phe	Leu	Gln	Leu	Cys	Phe	Tyr	Thr	Glu	Leu
	130					135						140			
Leu	Thr	Cys	Tyr	Ala	Leu	Met	Phe	Ser	Phe	Cys	His	Tyr	Tyr	Tyr	Phe
145					150					155					160
Leu	Pro	Leu	Lys	Lys	Arg	Asn	Leu	Asp	Leu	Phe	Val	Phe	Arg	His	Glu
			165					170						175	
Leu	Ala	Ile	Met	Arg	Leu	Ala	Ala	Phe	Met	Gly	Ile	Thr	Met	Leu	Val
			180					185						190	
Gly	Ile	Thr	Gly	Leu	Phe	Tyr	Thr	Gln	Leu	Ile	Gly	Ile	Ile	Thr	Pro
	195						200					205			
Cys	Ser	Leu	Ile	Leu	Leu	Lys	Cys	Gly	Ser	Val	Ser	Asn	Asn	Ser	Leu



210	215	220
Gly Asp Leu Met Lys Ile Ser Glu Thr Phe Ala Leu Arg Ile Pro Ser		
225	230	235
Phe Val Val Met Cys Pro Glu Asn Ser Ser Leu Arg Val Phe Asn Ser		240
	245	250
Val Lys Leu Leu Leu Cys Leu Asp Ser Pro Leu Ile Gln Trp Ser Thr		255
	260	265
		270

Lys

&lt;210&gt; 3545

&lt;211&gt; 3657

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3545

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1080  
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<212> PRT

<213> Homo sapiens

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	260	265
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275	280	285
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Arg Ala Arg Ser Met Asp Ser Ser Asp Leu Ser Asp Gly Ala Val Thr		430
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Ser Thr His Arg Arg Asp Arg Gln Ala Phe Ser Met Tyr Glu Pro Gly		525
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&lt;211&gt; 346

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3549

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 545

<210> 3552  
 <211> 55  
 <212> PRT  
 <213> Homo sapiens

<400> 3552  
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 Ala Lys Lys Asp Met Leu Ala Ala Leu Lys Ser Arg Gln Glu Ala Leu

	20		25		30										
Glu	Glu	Thr	Leu	Arg	Gln	Arg	Leu	Glu	Glu	Leu	Lys	Lys	Leu	Cys	Leu
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Arg	Glu	Ala	Val	Ser	Leu	Ser									
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&lt;210&gt; 3553

&lt;211&gt; 1412

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3553

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 gatgaccagc tcaacatcct gcccatctcc tcccacgttg ccaccatgga ggccctgcct  
 180  
 ccccagactc cggatgagag tcttggtcct tctgatctgg agctgaggga gttgaaggag  
 240  
 agcttgccagg acaccagcc tgtgggtgtg ttggtggact gctgtaagac tctagaccag  
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 720  
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 780  
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 1260

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 1320  
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 1380  
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 1412

<210> 3554

<211> 419

<212> PRT

<213> Homo sapiens

<400> 3554

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Gln	Asp	Val	Val	Gly	Arg	Phe	Asn	Glu	Arg	Phe	Ile	Leu	Ser	Leu	Ala
		20						25					30		
Ser	Cys	Lys	Lys	Cys	Leu	Val	Ile	Asp	Asp	Gln	Leu	Asn	Ile	Leu	Pro
	35						40					45			
Ile	Ser	Ser	His	Val	Ala	Thr	Met	Glu	Ala	Leu	Pro	Pro	Gln	Thr	Pro
	50					55					60				
Asp	Glu	Ser	Leu	Gly	Pro	Ser	Asp	Leu	Glu	Leu	Arg	Glu	Leu	Lys	Glu
65					70				75					80	
Ser	Leu	Gln	Asp	Thr	Gln	Pro	Val	Gly	Val	Leu	Val	Asp	Cys	Cys	Lys
			85					90					95		
Thr	Leu	Asp	Gln	Ala	Lys	Ala	Val	Leu	Lys	Phe	Ile	Glu	Gly	Ile	Ser
		100						105					110		
Glu	Lys	Thr	Leu	Arg	Ser	Thr	Val	Ala	Leu	Thr	Ala	Ala	Arg	Gly	Arg
	115						120					125			
Gly	Lys	Ser	Ala	Ala	Leu	Gly	Leu	Ala	Ile	Ala	Gly	Ala	Val	Ala	Phe
	130					135					140				
Gly	Tyr	Ser	Asn	Ile	Phe	Val	Thr	Ser	Pro	Ser	Pro	Asp	Asn	Leu	His
145			150						155					160	
Thr	Leu	Phe	Glu	Phe	Val	Phe	Lys	Gly	Phe	Asp	Ala	Leu	Gln	Tyr	Gln
			165					170					175		
Glu	His	Leu	Asp	Tyr	Glu	Ile	Ile	Gln	Ser	Leu	Asn	Pro	Glu	Phe	Asn
		180						185					190		
Lys	Ala	Val	Ile	Ile	Val	Asn	Val	Phe	Arg	Glu	His	Arg	Gln	Thr	Ile
	195					200						205			
Gln	Tyr	Ile	His	Pro	Ala	Asp	Ala	Val	Lys	Leu	Gly	Gln	Ala	Glu	Leu
	210					215					220				
Val	Val	Ile	Asp	Glu	Ala	Ala	Ala	Ile	Pro	Leu	Pro	Leu	Val	Lys	Ser
225				230						235				240	
Leu	Leu	Gly	Pro	Tyr	Leu	Val	Phe	Met	Ala	Ser	Thr	Ile	Asn	Gly	Tyr
			245					250					255		
Glu	Gly	Thr	Gly	Arg	Ser	Leu	Ser	Leu	Lys	Leu	Ile	Gln	Gln	Leu	Arg
		260					265					270			
Gln	Gln	Ser	Ala	Gln	Ser	Gln	Val	Ser	Thr	Thr	Ala	Glu	Asn	Lys	Thr
	275					280						285			
Thr	Thr	Thr	Ala	Arg	Leu	Ala	Ser	Ala	Arg	Thr	Leu	His	Glu	Val	Ser
	290					295					300				
Leu	Gln	Glu	Ser	Ile	Arg	Tyr	Ala	Pro	Gly	Asp	Ala	Val	Glu	Lys	Trp
305				310						315				320	
Leu	Asn	Asp	Leu	Leu	Cys	Leu	Asp	Cys	Leu	Asn	Ile	Thr	Arg	Ile	Val

				325						330					335				
Ser	Gly	Cys	Pro	Leu	Pro	Glu	Ala	Cys	Glu	Leu	Tyr	Tyr	Val	Asn	Arg				
			340					345					350						
Asp	Thr	Leu	Phe	Cys	Tyr	His	Lys	Ala	Ser	Glu	Val	Phe	Leu	Gln	Arg				
		355					360					365							
Leu	Met	Ala	Leu	Tyr	Val	Ala	Ser	His	Tyr	Lys	Asn	Ser	Pro	Asn	Asp				
	370					375					380								
Leu	Gln	Met	Leu	Ser	Asp	Ala	Pro	Ser	His	His	Leu	Phe	Cys	Leu	Leu				
385					390					395					400				
Pro	Pro	Val	Pro	Pro	Thr	Gln	Asn	Ala	Leu	Pro	Lys	Val	Leu	Ala	Val				
			405					410					415						

Ile Gln Val

&lt;210&gt; 3555

&lt;211&gt; 1038

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3555

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ctggtgggggt cggaccaggc cccgggcccgg gacaagaaca tccccgccgg gctgcagtcc  
120  
atgaaccagg cgttgcagag gcgcttcgcc aaggggggtgc agtacaacat gaagatagtg  
180  
atccggggag acaggaacac gggcaagaca gcgctgtggc accgcctgca gggccggccg  
240  
ttcgtggagg agtacatccc cacacaggag atccaggcca ccagcatcca ctggagctac  
300  
aagaccacgg atgacatcgt gaagggtgaa gtctgggatg tagtagacaa aggaaaatgc  
360  
aaaaagcgag gcgacggctt aaagatggag aacgaccccc aggaggcgga gtctgaaatg  
420  
gccctggatg ctgagttcct ggacgtgtac aagaactgca acgggggtgg catgatgttc  
480  
gacattacca agcagtggac cttcaattac attctccggg agcttccaaa agtgcccacc  
540  
cacgtgccag tgtgcgtgct ggggaactac cgggacatgg gcgagcaccg agtcacnnc  
600  
tgccggacgn acgtgcgtga cttcatcgac aacctggaca gacctccagg ttcttcctac  
660  
ttccgctatg ctgagtcttc catgaagaac agcttcggcc taaagtacct tcataagttc  
720  
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780  
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840  
aactacggca tcttcctgga gatgatggag gctcgcagcc gtggccatgc gtccccactg  
900  
gcggccaacg ggcagagccc atccccgggc tcccagtcac cagtgggtgcc tgcaggcgct  
960  
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1020

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1038

<210> 3556

<211> 333

<212> PRT

<213> Homo sapiens

<400> 3556

Met	Phe	Ser	Ala	Leu	Lys	Lys	Leu	Val	Gly	Ser	Asp	Gln	Ala	Pro	Gly
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Arg	Asp	Lys	Asn	Ile	Pro	Ala	Gly	Leu	Gln	Ser	Met	Asn	Gln	Ala	Leu
			20					25					30		
Gln	Arg	Arg	Phe	Ala	Lys	Gly	Val	Gln	Tyr	Asn	Met	Lys	Ile	Val	Ile
		35					40					45			
Arg	Gly	Asp	Arg	Asn	Thr	Gly	Lys	Thr	Ala	Leu	Trp	His	Arg	Leu	Gln
	50					55					60				
Gly	Arg	Pro	Phe	Val	Glu	Glu	Tyr	Ile	Pro	Thr	Gln	Glu	Ile	Gln	Val
65					70					75				80	
Thr	Ser	Ile	His	Trp	Ser	Tyr	Lys	Thr	Thr	Asp	Asp	Ile	Val	Lys	Val
			85						90					95	
Glu	Val	Trp	Asp	Val	Val	Asp	Lys	Gly	Lys	Cys	Lys	Lys	Arg	Gly	Asp
			100					105					110		
Gly	Leu	Lys	Met	Glu	Asn	Asp	Pro	Gln	Glu	Ala	Glu	Ser	Glu	Met	Ala
		115					120					125			
Leu	Asp	Ala	Glu	Phe	Leu	Asp	Val	Tyr	Lys	Asn	Cys	Asn	Gly	Val	Val
	130					135					140				
Met	Met	Phe	Asp	Ile	Thr	Lys	Gln	Trp	Thr	Phe	Asn	Tyr	Ile	Leu	Arg
145					150					155				160	
Glu	Leu	Pro	Lys	Val	Pro	Thr	His	Val	Pro	Val	Cys	Val	Leu	Gly	Asn
			165						170					175	
Tyr	Arg	Asp	Met	Gly	Glu	His	Arg	Val	Ile	Xaa	Cys	Arg	Thr	Xaa	Val
		180					185						190		
Arg	Asp	Phe	Ile	Asp	Asn	Leu	Asp	Arg	Pro	Pro	Gly	Ser	Ser	Tyr	Phe
	195					200					205				
Arg	Tyr	Ala	Glu	Ser	Ser	Met	Lys	Asn	Ser	Phe	Gly	Leu	Lys	Tyr	Leu
	210					215					220				
His	Lys	Phe	Phe	Asn	Ile	Pro	Phe	Leu	Gln	Leu	Gln	Arg	Glu	Thr	Leu
225					230					235				240	
Leu	Arg	Gln	Leu	Glu	Thr	Asn	Gln	Leu	Asp	Met	Asp	Ala	Thr	Leu	Glu
			245						250					255	
Glu	Leu	Ser	Val	Gln	Gln	Glu	Thr	Glu	Asp	Gln	Asn	Tyr	Gly	Ile	Phe
		260						265				270			
Leu	Glu	Met	Met	Glu	Ala	Arg	Ser	Arg	Gly	His	Ala	Ser	Pro	Leu	Ala
	275						280					285			
Ala	Asn	Gly	Gln	Ser	Pro	Ser	Pro	Gly	Ser	Gln	Ser	Pro	Val	Val	Pro
	290					295					300				
Ala	Gly	Ala	Val	Ser	Thr	Gly	Ser	Ser	Ser	Pro	Gly	Thr	Ala	Gln	Pro
305					310					315				320	
Ala	Pro	Gln	Leu	Pro	Leu	Asn	Gly	Cys	Pro	Thr	Ile	Leu			
			325						330						

<210> 3557

<211> 486



&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3557

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 60  
 ccggcattga tcaagtccat ctgggctatg gccataagcc aacaccagtt ctatctggac  
 120  
 agaaagcaga gtaagtccaa aatccatgca gcacgcagcc tgagtgagat cgccatcgac  
 180  
 ctgaccgaga cggggacgct gaagacctcg aagctggcca acatgggtag caaggggaag  
 240  
 atcatcagcg gcacgcagcg cagcctgctg tcttcaggat ctggtgccag gagacactgc  
 300  
 attctactcc caggttctca ggaatcagat agctcgagct cggccaagaa ggacatgctg  
 360  
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 420  
 ctgaagaagc tgtgtctccg agaagctgag ctcacgggca agctgccagt agaatatccc  
 480  
 ctggat  
 486

&lt;210&gt; 3558

&lt;211&gt; 162

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3558

Ser	Val	Thr	Arg	Arg	Thr	Phe	Gly	His	Ser	Gly	Ile	Ala	Val	His	Thr
1				5					10					15	
Trp	Tyr	Ala	Cys	Pro	Ala	Leu	Ile	Lys	Ser	Ile	Trp	Ala	Met	Ala	Ile
			20					25					30		
Ser	Gln	His	Gln	Phe	Tyr	Leu	Asp	Arg	Lys	Gln	Ser	Lys	Ser	Lys	Ile
		35					40				45				
His	Ala	Ala	Arg	Ser	Leu	Ser	Glu	Ile	Ala	Ile	Asp	Leu	Thr	Glu	Thr
	50					55					60				
Gly	Thr	Leu	Lys	Thr	Ser	Lys	Leu	Ala	Asn	Met	Gly	Ser	Lys	Gly	Lys
65					70				75					80	
Ile	Ile	Ser	Gly	Ser	Ser	Gly	Ser	Leu	Leu	Ser	Ser	Gly	Ser	Gly	Ala
			85					90					95		
Arg	Arg	His	Cys	Ile	Leu	Leu	Pro	Gly	Ser	Gln	Glu	Ser	Asp	Ser	Ser
			100					105					110		
Gln	Ser	Ala	Lys	Lys	Asp	Met	Leu	Ala	Ala	Leu	Lys	Ser	Arg	Gln	Glu
		115					120					125			
Ala	Leu	Glu	Glu	Thr	Leu	Arg	Gln	Arg	Leu	Glu	Glu	Leu	Lys	Lys	Leu
	130					135				140					
Cys	Leu	Arg	Glu	Ala	Glu	Leu	Thr	Gly	Lys	Leu	Pro	Val	Glu	Tyr	Pro
145					150					155					160
Leu	Asp														

&lt;210&gt; 3559

&lt;211&gt; 673

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3559

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 120  
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 180  
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 240  
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 300  
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 360  
 ctgctgcgac tagccaagct aaatgagtta gatgattctt tggagaaagt atcagagttc  
 420  
 ccagttattg tggagtcatt aaaatgtctg tgtaatatag tgttcaacag tcagatggca  
 480  
 cagcagctca gcctggaact taatcttgct gcaaagctct gtaacctcct gagaaagtgc  
 540  
 aaggaccgga aatttatcaa tgacattaag tgctttgact tgcgcttgct cttccttctg  
 600  
 tcacttttgc acaccgacat caggtcacaa ttgcgctatg agctccaggg actaccgctg  
 660  
 ctaacgcaga tcg  
 673

&lt;210&gt; 3560

&lt;211&gt; 195

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3560

Met	Asp	Glu	Glu	Arg	Ala	Leu	Tyr	Ile	Val	Arg	Ala	Gly	Glu	Ala	Gly
1				5					10					15	
Ala	Ile	Glu	Arg	Val	Leu	Arg	Asp	Tyr	Ser	Asp	Lys	His	Arg	Ala	Thr
			20					25					30		
Phe	Lys	Phe	Glu	Ser	Thr	Asp	Glu	Asp	Lys	Arg	Lys	Lys	Leu	Cys	Glu
		35					40					45			
Gly	Ile	Phe	Lys	Val	Leu	Ile	Lys	Asp	Ile	Pro	Thr	Thr	Cys	Gln	Val
	50					55				60					
Ser	Cys	Leu	Glu	Val	Leu	Arg	Ile	Leu	Ser	Arg	Asp	Lys	Lys	Val	Leu
65					70					75				80	
Val	Pro	Val	Thr	Thr	Lys	Glu	Asn	Met	Gln	Ile	Leu	Leu	Arg	Leu	Ala
				85					90					95	
Lys	Leu	Asn	Glu	Leu	Asp	Asp	Ser	Leu	Glu	Lys	Val	Ser	Glu	Phe	Pro
			100					105					110		
Val	Ile	Val	Glu	Ser	Leu	Lys	Cys	Leu	Cys	Asn	Ile	Val	Phe	Asn	Ser
		115					120					125			
Gln	Met	Ala	Gln	Gln	Leu	Ser	Leu	Glu	Leu	Asn	Leu	Ala	Ala	Lys	Leu
	130					135					140				
Cys	Asn	Leu	Leu	Arg	Lys	Cys	Lys	Asp	Arg	Lys	Phe	Ile	Asn	Asp	Ile

145                      150                      155                      160  
 Lys Cys Phe Asp Leu Arg Leu Leu Phe Leu Leu Ser Leu Leu His Thr  
                                  165                      170                      175  
 Asp Ile Arg Ser Gln Leu Arg Tyr Glu Leu Gln Gly Leu Pro Leu Leu  
                                  180                      185                      190  
 Thr Gln Ile  
                                  195

<210> 3561  
 <211> 523  
 <212> DNA  
 <213> Homo sapiens

<400> 3561  
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 120  
 ggagggcatg agacgcctat tgcagagctg ctcaccagaa ggtcacagga atttagaaga  
 180  
 gaagctccta cctgcccccg atcatgcacg tggccactga ggatgccaga cgaggtgatg  
 240  
 ctggtctcat agagaatgta cccgaaggac tgtccatttc cccattgac tggcaggttc  
 300  
 tccatgttga tgggcttttc agacttgatt ggctgcgtac agaagagatg gaggggtggg  
 360  
 caggctcagg aggagtgggg tcacagacag actctgcttg ggggctggca catgggggtgg  
 420  
 aagcggaggt ttggtgggtg ttttctactt tgacttctca ttgcactaaa catacaactc  
 480  
 tccaggggtga cggggaagag gagtggggca aaggggtgtg cac  
 523

<210> 3562  
 <211> 106  
 <212> PRT  
 <213> Homo sapiens

<400> 3562  
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 Glu Asn Val Pro Glu Gly Leu Ser Ile Ser Pro Ile Asp Trp Gln Val  
                                  20                      25                      30  
 Leu His Val Asp Gly Leu Phe Arg Leu Asp Trp Leu Arg Thr Glu Glu  
                                  35                      40                      45  
 Met Glu Gly Trp Ala Gly Ser Gly Gly Val Gly Ser Gln Thr Asp Ser  
                                  50                      55                      60  
 Ala Trp Gly Leu Ala His Gly Val Glu Ala Glu Val Trp Trp Val Phe  
 65                      70                      75                      80  
 Ser Thr Leu Thr Ser His Cys Thr Lys His Thr Thr Leu Gln Gly Asp  
                                  85                      90                      95  
 Gly Glu Glu Glu Trp Gly Lys Gly Val Cys  
                                  100                      105

<210> 3563  
<211> 359  
<212> DNA  
<213> Homo sapiens

<400> 3563  
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120  
cccctgccgc cgtcgacggg gccccagtg ggcgcgggccc tggacgcgga gcagcgcacg  
180  
gtgttcgcct tcgtgctctg cctgctcgtg gtgctggtgc tgttgatggt gcgctgcgtg  
240  
cgcacccctgc tcgacccta cagccgcagc cccgcctcgt cctggaccga ccacaaggag  
300  
gcgctcgagc gcgggcagtt cgactacgcg ttggtgtgag ggcgcggcg cccctagg  
359

<210> 3564  
<211> 82  
<212> PRT  
<213> Homo sapiens

<400> 3564  
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Gly Pro Pro Val Gly Ala Gly Leu Asp Ala Glu Gln Arg Thr Val Phe  
20 25 30  
Ala Phe Val Leu Cys Leu Leu Val Val Leu Val Leu Leu Met Val Arg  
35 40 45  
Cys Val Arg Ile Leu Leu Asp Pro Tyr Ser Arg Met Pro Ala Ser Ser  
50 55 60  
Trp Thr Asp His Lys Glu Ala Leu Glu Arg Gly Gln Phe Asp Tyr Ala  
65 70 75 80  
Leu Val

<210> 3565  
<211> 580  
<212> DNA  
<213> Homo sapiens

<400> 3565  
acgcgtcgtg ggtgggaaaa gggatgccag gacaccagaa gagcaatata aaacagctcc  
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Thr	Pro	Glu	Gly	Leu	Lys	Pro	Leu	Asp	Cys	Phe	Tyr	Leu	Lys	Leu	His
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Gln	Ser	Asp	Arg	Ser	Lys	Arg	Pro	Phe	Asn	Pro	Val	Thr	Val	Asn	Leu
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305				310						315					320
Val	Met	Gly	Ser	Leu	Met	His	Pro	Ser	Asp	Leu	Arg	Ala	Lys	Glu	His
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Val	Gln	Glu	Val	Asp	Thr	Thr	Glu	Gln	Leu	Lys	Arg	Ile	Ser	Arg	Met



2732



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	805	810
Cys Ser Leu Arg Ser Lys Glu Glu Pro Cys Glu Glu Gly Ser Leu Pro		815
	820	825
Gln Ser Leu His Thr His Gln Asp Thr Gln Gly Thr Ser His Arg Trp		830
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Pro Ile Thr Ile Leu Ser Phe Arg Glu Phe Thr Tyr His Phe Arg Val		845
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 <212> DNA  
 <213> Homo sapiens

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 <212> PRT  
 <213> Homo sapiens

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 Ser Tyr Phe Leu Phe Val Ile Phe Thr Ala Tyr Ala Met Leu Pro Leu  
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 Gly Met Arg Asp Ala Ala Val Ala Gly Leu Ala Ser Ser Leu Ser His

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&lt;211&gt; 1236

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3573

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<212> PRT

<213> Homo sapiens

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Pro	Phe	Asp	Val	Glu	Arg	Gly	Pro	Pro	Ser	Pro	Ala	Val	Gln	His	Phe
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Glu	Arg	Arg	Val	Leu	Leu	Thr	Ala	Ser	Lys	Leu	Ser	Thr	Leu	Arg	Arg
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355

360

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 Leu Glu Arg Tyr Met Cys Ser Arg Phe Phe Ile Asp Phe Pro Asp Ile  
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<210> 3581  
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&lt;210&gt; 3584

&lt;211&gt; 356

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3584

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&lt;210&gt; 3585

&lt;211&gt; 2782

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3585

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&lt;210&gt; 3586

&lt;211&gt; 663

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3586

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2746



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&lt;211&gt; 3148

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3587

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&lt;210&gt; 3588

&lt;211&gt; 499

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3588

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		35					40					45			
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<212> DNA
<213> Homo sapiens
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120
aatagttctt gaccaggtc cctccatgaa cctcgaagct gaccagcca taggggggat
180
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 ctctccacaa gacaatagac aggaagggga cccagtggcc cccccaagct tagctaattg  
 300  
 gagtgaagaa ccaggcagaa cccaggcagc agatgggata ggagtttcca agccagtgct  
 360  
 tggggatagg ccctcccaat tcagaaacaa agcaaggccc tggccacagc caggaaggat  
 420  
 tgtaagggcc ttctgagca gacacaaagg agccctgagc tgctgggggt gatgaggagc  
 480  
 ggaggcaggg ccaggcagag ggtctgcaaa gaattacact ggaaaggtgg aagggggaca  
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 gaggcagcca cgcgt  
 675

<210> 3590  
 <211> 117  
 <212> PRT  
 <213> Homo sapiens

<400> 3590  
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 Asp Pro Met Ser Pro Phe His Leu Ser Ser Val Ile Leu Cys Arg Pro  
 35 40 45  
 Ser Ala Trp Pro Cys Leu Arg Ser Ser Ser Pro Pro Ala Ala Gln Gly  
 50 55 60  
 Ser Phe Val Ser Ala Gln Glu Gly Pro Tyr Asn Pro Ser Trp Leu Trp  
 65 70 75 80  
 Pro Gly Pro Cys Phe Val Ser Glu Leu Gly Gly Pro Ile Pro Lys His  
 85 90 95  
 Trp Leu Gly Asn Ser Tyr Pro Ile Cys Cys Leu Gly Ser Ala Trp Phe  
 100 105 110  
 Phe Thr His Ile Ser  
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<210> 3591  
 <211> 669  
 <212> DNA  
 <213> Homo sapiens

<400> 3591  
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 cgatggtctt catcaggggt gattcctaata gaaaaatac gaaatattgg aatctcagct  
 180

cacattgatt ctgggaaaac tacattaaca gaacgagtcc tttactacac tggcagaatt  
 240  
 gcaaagatgc atgaggtgaa aggtaaagat ggagttggtg ctgtcatgga ttccatggaa  
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 420  
 gccctgagag tggttgatgg tgcagtcctt gttctctgtg ctggtggagg ggtacagtgc  
 480  
 cagaccatga ctgtcaatcg tcagatgaag cgctacaacg ttccgtttct aacttttatt  
 540  
 aacaaattgg accgaatggg ctccaacca gccagggccc tgcagcaa at gaggtctaaa  
 600  
 ctaaatacata atgcagcgtt tatgcagata cccatggggtt tggagggtaa ttttaaagg  
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 attgtagat  
 669

&lt;210&gt; 3592

&lt;211&gt; 223

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3592

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		20					25						30		
Lys	Gln	Val	Asn	Trp	Lys	Ala	Cys	Arg	Trp	Ser	Ser	Ser	Gly	Val	Ile
		35					40					45			
Pro	Asn	Glu	Lys	Ile	Arg	Asn	Ile	Gly	Ile	Ser	Ala	His	Ile	Asp	Ser
	50					55					60				
Gly	Lys	Thr	Thr	Leu	Thr	Glu	Arg	Val	Leu	Tyr	Tyr	Thr	Gly	Arg	Ile
65				70					75					80	
Ala	Lys	Met	His	Glu	Val	Lys	Gly	Lys	Asp	Gly	Val	Gly	Ala	Val	Met
			85					90					95		
Asp	Ser	Met	Glu	Leu	Glu	Arg	Gln	Arg	Gly	Ile	Thr	Ile	Gln	Ser	Ala
		100						105					110		
Ala	Thr	Tyr	Thr	Met	Trp	Lys	Asp	Val	Asn	Ile	Asn	Ile	Ile	Asp	Thr
		115					120					125			
Pro	Gly	His	Val	Asp	Phe	Thr	Ile	Glu	Val	Glu	Arg	Ala	Leu	Arg	Val
	130					135					140				
Leu	Asp	Gly	Ala	Val	Leu	Val	Leu	Cys	Ala	Val	Gly	Gly	Val	Gln	Cys
145				150					155					160	
Gln	Thr	Met	Thr	Val	Asn	Arg	Gln	Met	Lys	Arg	Tyr	Asn	Val	Pro	Phe
			165					170					175		
Leu	Thr	Phe	Ile	Asn	Lys	Leu	Asp	Arg	Met	Gly	Ser	Asn	Pro	Ala	Arg
		180					185					190			
Ala	Leu	Gln	Gln	Met	Arg	Ser	Lys	Leu	Asn	His	Asn	Ala	Ala	Phe	Met
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Gln	Ile	Pro	Met	Gly	Leu	Glu	Gly	Asn	Phe	Lys	Gly	Ile	Val	Asp	
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<210> 3593  
 <211> 1005  
 <212> DNA  
 <213> Homo sapiens

<400> 3593  
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 120  
 ccctcaagca acggatcccc atggcgcttg ttgggcgcgt tgtgcctgca gcggccacct  
 180  
 gtagtctcca agccgttgac ccattgacg gaagagatgg cgtctctact gcagcagatt  
 240  
 gagatagaga gaagcctgta ttcagaccac gagcttcgtg ctctggatga aaaccagcga  
 300  
 ctggcaaaga agaaagctga ccttcattgat gaagaagatg aacaggatat attgctggcg  
 360  
 caagatttgg aagatatgtg ggagcagaaa tttctacagt tcaaacttgg agctcgcata  
 420  
 acagaagctg atgaaaagaa tgaccgaaca tccctgaaca ggaagctaga caggaacctt  
 480  
 gtccctgtag tcagagagaa gtttgagac caggatgttt ggatactgcc ccaggcagag  
 540  
 tggcagcctg gggagaccct tcgaggaaca gctgaacgaa ccctggccac actctcagaa  
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 aacaacatgg aagccaagtt cctaggaaat gcaccctgtg ggcactacac attcaagttc  
 660  
 cccagggcaa tgcggacaga gagtaacctc ggagccaagg tggtcttctt caaagcactg  
 720  
 ctattaactg gagacttttc ccaggctggg aataagggcc atcatgtgtg ggtcactaag  
 780  
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 840  
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 900  
 caaggacatt gtgtgattgc ctcacatttg caggtaatat caagcagcaa actaaattct  
 960  
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 1005

<210> 3594  
 <211> 282  
 <212> PRT  
 <213> Homo sapiens

<400> 3594  
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 20 25 30  
 Arg Ser Leu Ala Leu Ala Ala Ala Pro Ser Ser Asn Gly Ser Pro Trp  
 35 40 45  
 Arg Leu Leu Gly Ala Leu Cys Leu Gln Arg Pro Pro Val Val Ser Lys



50	55	60
Pro Leu Thr Pro Leu Gln Glu Glu Met Ala Ser Leu Leu Gln Gln Ile		
65	70	75
Glu Ile Glu Arg Ser Leu Tyr Ser Asp His Glu Leu Arg Ala Leu Asp		80
	85	90
Glu Asn Gln Arg Leu Ala Lys Lys Lys Ala Asp Leu His Asp Glu Glu		95
	100	105
Asp Glu Gln Asp Ile Leu Leu Ala Gln Asp Leu Glu Asp Met Trp Glu		110
	115	120
Gln Lys Phe Leu Gln Phe Lys Leu Gly Ala Arg Ile Thr Glu Ala Asp		125
	130	135
Glu Lys Asn Asp Arg Thr Ser Leu Asn Arg Lys Leu Asp Arg Asn Leu		140
145	150	155
Val Leu Leu Val Arg Glu Lys Phe Gly Asp Gln Asp Val Trp Ile Leu		160
	165	170
Pro Gln Ala Glu Trp Gln Pro Gly Glu Thr Leu Arg Gly Thr Ala Glu		175
	180	185
Arg Thr Leu Ala Thr Leu Ser Glu Asn Asn Met Glu Ala Lys Phe Leu		190
	195	200
Gly Asn Ala Pro Cys Gly His Tyr Thr Phe Lys Phe Pro Gln Ala Met		205
	210	215
Arg Thr Glu Ser Asn Leu Gly Ala Lys Val Phe Phe Phe Lys Ala Leu		220
225	230	235
Leu Leu Thr Gly Asp Phe Ser Gln Ala Gly Asn Lys Gly His His Val		240
	245	250
Trp Val Thr Lys Asp Glu Leu Gly Asp Tyr Leu Lys Pro Lys Tyr Leu		255
	260	265
Ala Gln Val Arg Arg Phe Val Ser Asp Leu		270
	275	280

&lt;210&gt; 3595

&lt;211&gt; 1903

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3595

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540

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gacagctagg gttcaaaacg ttctcaccaa atccaatgct cctcacatat taattttata  
1860  
accagacaaa taaatattag agacaaccac catcaaaaaa aaa  
1903

&lt;210&gt; 3596

&lt;211&gt; 496

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3596

Phe Gln Val Thr Arg Gly Asp Tyr Ala Pro Ile Leu Gln Lys Val Val

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Glu Gln Leu Glu Lys Ala Lys Ala Tyr Ala Ala Asn Ser His Gln Gly			
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Gln Met Leu Ala Gln Tyr Ile Glu Ser Phe Thr Gln Gly Ser Ile Glu			
35	40	45	
Ala His Lys Arg Gly Ser Arg Phe Trp Ile Gln Asp Lys Gly Pro Ile			
50	55	60	
Val Glu Ser Tyr Ile Gly Phe Ile Glu Ser Tyr Arg Asp Pro Phe Gly			
65	70	75	80
Ser Arg Gly Glu Phe Glu Gly Phe Val Ala Val Val Asn Lys Ala Met			
85	90	95	
Ser Ala Lys Phe Glu Arg Leu Val Ala Ser Ala Glu Gln Leu Leu Lys			
100	105	110	
Glu Leu Pro Trp Pro Pro Thr Phe Glu Lys Asp Lys Phe Leu Thr Pro			
115	120	125	
Asp Phe Thr Ser Leu Asp Val Leu Thr Phe Ala Gly Ser Gly Ile Pro			
130	135	140	
Ala Gly Ile Asn Ile Pro Asn Tyr Asp Asp Leu Arg Gln Thr Glu Gly			
145	150	155	160
Phe Lys Asn Val Ser Leu Gly Asn Val Leu Ala Val Ala Tyr Ala Thr			
165	170	175	
Gln Arg Glu Lys Leu Thr Phe Leu Glu Glu Asp Asp Lys Asp Leu Tyr			
180	185	190	
Ile Leu Trp Lys Gly Pro Ser Phe Asp Val Gln Val Gly Leu His Glu			
195	200	205	
Leu Leu Gly His Gly Ser Gly Lys Leu Phe Val Gln Asp Glu Lys Gly			
210	215	220	
Ala Phe Asn Phe Asp Gln Glu Thr Val Ile Asn Pro Glu Thr Gly Glu			
225	230	235	240
Gln Ile Gln Ser Trp Tyr Arg Ser Gly Glu Thr Trp Asp Ser Lys Phe			
245	250	255	
Ser Thr Ile Ala Ser Ser Tyr Glu Glu Cys Arg Ala Glu Ser Val Gly			
260	265	270	
Leu Tyr Leu Cys Leu His Pro Gln Val Leu Glu Ile Phe Gly Phe Glu			
275	280	285	
Gly Ala Asp Ala Glu Asp Val Ile Tyr Val Asn Trp Leu Asn Met Val			
290	295	300	
Arg Ala Gly Leu Leu Ala Leu Glu Phe Tyr Thr Pro Glu Ala Phe Asn			
305	310	315	320
Trp Arg Gln Ala His Met Gln Ala Arg Phe Val Ile Leu Arg Val Leu			
325	330	335	
Leu Glu Ala Gly Glu Gly Leu Val Thr Ile Thr Pro Thr Thr Gly Ser			
340	345	350	
Asp Gly Arg Pro Asp Ala Arg Val Arg Leu Asp Arg Ser Lys Ile Arg			
355	360	365	
Ser Val Gly Lys Pro Ala Leu Glu Arg Phe Leu Arg Arg Leu Gln Val			
370	375	380	
Leu Lys Ser Thr Gly Asp Val Ala Gly Gly Arg Ala Leu Tyr Glu Gly			
385	390	395	400
Tyr Ala Thr Val Thr Asp Ala Pro Pro Glu Cys Phe Leu Thr Leu Arg			
405	410	415	
Asp Thr Val Leu Leu Arg Lys Glu Ser Arg Lys Leu Ile Val Gln Pro			
420	425	430	
Asn Thr Arg Leu Glu Gly Asn Gly Ser Asp Val Gln Leu Leu Glu Tyr			

	435		440		445	
Glu	Ala	Ser	Ala	Ala	Gly	Leu
						Ile
						Arg
						Ser
						Phe
						Ser
						Glu
						Arg
						Phe
						Pro
	450		455		460	
Glu	Asp	Gly	Pro	Glu	Leu	Glu
						Ile
						Leu
						Thr
						Gln
						Leu
						Ala
						Thr
						Ala
465			470		475	480
Asp	Ala	Arg	Phe	Trp	Lys	Gly
						Pro
						Ser
						Glu
						Ala
						Pro
						Ser
						Gly
						Gln
						Ala
	485		490		495	

<210> 3597  
 <211> 1090  
 <212> DNA  
 <213> Homo sapiens

<400> 3597  
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 120  
 gaaaatggtg ttctgctgtg tgatttgatt aataagctta aacctggcgt cattaagaag  
 180  
 atcaatagac tgtctacacc aatagcagga ttggataata taaacgtttt cttgaaagct  
 240  
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 360  
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 420  
 aatttgaaag cgtttgagaa tcttttagga caagcactga cgaaggcact cgaagactcc  
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 660  
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 720  
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 780  
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<210> 3598

<211> 159  
 <212> PRT  
 <213> Homo sapiens

<400> 3598  
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 Asp Tyr Asn Lys Asp Asp Met Ser Tyr Arg Arg Ile Ser Ala Val Glu  
 35 40 45  
 Pro Lys Thr Ala Leu Pro Phe Asn Arg Phe Leu Pro Asn Lys Ser Arg  
 50 55 60  
 Gln Pro Ser Tyr Val Pro Ala Pro Leu Arg Lys Lys Lys Pro Asp Lys  
 65 70 75 80  
 His Glu Asp Asn Arg Arg Ser Trp Ala Ser Pro Val Tyr Thr Glu Ala  
 85 90 95  
 Asp Gly Thr Phe Ser Arg Ser Lys Ser Met Ser Asp Val Ser Ala Glu  
 100 105 110  
 Asp Val Gln Asn Leu Arg Gln Leu Arg Tyr Glu Glu Met Gln Lys Ile  
 115 120 125  
 Lys Ser Gln Leu Lys Glu Gln Asp Gln Lys Trp Gln Asp Asp Leu Ala  
 130 135 140  
 Lys Trp Lys Asp Arg Arg Lys Ser Tyr Thr Ser Asp Leu Gln Lys  
 145 150 155

<210> 3599  
 <211> 691  
 <212> DNA  
 <213> Homo sapiens

<400> 3599  
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 180  
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 300  
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 420  
 tttgcacatg ggcattgggg tacctgggcy cagctacgca cttctcacct ggggcctcat  
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<210> 3600  
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<212> PRT  
<213> Homo sapiens

<400> 3600  
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Met Val Glu Val Arg Ser Trp Ser Gly Ser Leu Val Gly Trp Leu Ala  
35 40 45  
Pro Arg Pro Leu Ser Val Pro Ile Glu His Leu Leu Gly Ala Lys Asn  
50 55 60  
Cys Cys Arg His Gly Gly Gln Trp Val Arg Arg Ala Val Pro Ala Val  
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Leu Ser Leu Val Gly Ala Ser Ser Leu His His Ala Val Tyr Leu Phe  
85 90 95  
Leu Leu

<210> 3601  
<211> 2963  
<212> DNA  
<213> Homo sapiens

<400> 3601  
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120  
tgtccaagga catttggtc gcaggcacag agctgattaa ctcgttatgt atcttttgat  
180  
aataaggcag cgatcattaa gaaaaacgtg tagccaatga aataacatgt tctgggcccc  
240  
accactggac tgggaggtgc agcgcaccca agcagaggct gcctcctgcc ctccacgcct  
300  
gctgctctcg caggcagggg ctctgctgct tacagcagtg cggccatctc ggcttctctc  
360  
cacatcgtct gtcacgcgct ggtccccacc atacctctcg ccaccccgct cctctgtccc  
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720

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245	250	255
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&lt;210&gt; 3603

&lt;211&gt; 1082

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3603

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 <212> DNA  
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<212> PRT

<213> Homo sapiens

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Ser	Val	Thr	Val	Gly	Asn	Ile	Pro	Lys	Asn	Ser	Val	Ser	Ser	Ser	Ser
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385          390          395          400
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<213> Homo sapiens

<400> 3610  
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20 25 30  
Glu Pro Gln Asp Leu Glu Ser Thr Asn Leu Leu Glu Ser Glu Ala Pro  
35 40 45  
Arg Asp Tyr Phe Leu Lys Phe Ala Tyr Ile Val Asp Leu Asp Ser Asp  
50 55 60  
Thr Ala Asp Lys Phe Leu Gln Leu Xaa Trp Asn Gln Arg Cys Gln Glu  
65 70 75 80  
Gly Ala Val Ser Tyr Gln Xaa Tyr Pro Leu Ser Pro Thr Arg Phe Thr  
85 90 95  
His Cys Glu Gln Val Leu Gly Glu Gly Ala Leu Asp Arg Gly Thr Tyr  
100 105 110  
Tyr Trp Glu Val Glu Ile Ile Glu Gly Trp Val Ser Met Gly Val Met  
115 120 125  
Ala Ala Asp Phe Ser Pro Gln Glu Pro Tyr Asp Arg Gly Arg Leu Gly  
130 135 140  
Arg Asn Ala His Ser Cys Cys Leu Gln Trp Asn Gly Arg Ser Phe Ser  
145 150 155 160  
Val Trp Phe His Gly Leu Glu Ala Pro Leu Pro His Pro Phe Ser Pro  
165 170 175  
Thr Val Gly Val Cys Leu Glu Tyr Ala Asp Arg Ala Leu Ala Phe Tyr  
180 185 190  
Ala Val Arg Asp Gly Lys Met Ser Leu Leu Arg Arg Leu Lys Ala Ser  
195 200 205  
Arg Pro Arg Arg Gly Gly Ile Pro Ala Ser Pro Ile Asp Pro Phe Gln  
210 215 220  
Ser Arg Leu Asp Ser His Phe Ala Gly Leu Phe Thr His Arg Leu Lys  
225 230 235 240  
Pro Ala Phe Phe Leu Glu Ser Val Asp Ala His Leu Gln Ile Gly Pro  
245 250 255  
Leu Lys Lys Ser Cys Ile Ser Val Leu Lys Arg Arg  
260 265

<210> 3611  
<211> 816

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3611

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 180  
 gacccacgca gggcttcagt gacaaggagg acgtttgggc acagcggcat tgcagtgcac  
 240  
 acgtggtatg catgtccggc attgatcaag tccatctggg ctatggccat aagccaacac  
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 420  
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 660  
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 720  
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 780  
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 816

&lt;210&gt; 3612

&lt;211&gt; 272

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3612

Tyr	Gly	Val	His	Tyr	Tyr	Ala	Val	Lys	Asp	Lys	Gln	Gly	Ile	Pro	Trp
1				5					10					15	
Trp	Leu	Gly	Leu	Ser	Tyr	Lys	Gly	Ile	Phe	Gln	Tyr	Asp	Tyr	His	Asp
			20					25					30		
Lys	Val	Lys	Pro	Arg	Lys	Ile	Phe	Gln	Trp	Arg	Gln	Leu	Glu	Asn	Leu
			35				40					45			
Tyr	Phe	Arg	Glu	Lys	Lys	Phe	Ser	Val	Glu	Val	His	Asp	Pro	Arg	Arg
			50			55					60				
Ala	Ser	Val	Thr	Arg	Arg	Thr	Phe	Gly	His	Ser	Gly	Ile	Ala	Val	His
65				70					75					80	
Thr	Trp	Tyr	Ala	Cys	Pro	Ala	Leu	Ile	Lys	Ser	Ile	Trp	Ala	Met	Ala
			85					90					95		
Ile	Ser	Gln	His	Gln	Phe	Tyr	Leu	Asp	Arg	Lys	Gln	Ser	Lys	Ser	Lys
			100				105						110		
Ile	His	Ala	Ala	Arg	Ser	Leu	Ser	Glu	Ile	Ala	Ile	Asp	Leu	Thr	Glu

	115		120		125										
Thr	Gly	Thr	Leu	Lys	Thr	Ser	Lys	Leu	Ala	Asn	Met	Gly	Ser	Lys	Gly
	130					135					140				
Lys	Ile	Ile	Ser	Gly	Ser	Ser	Gly	Ser	Leu	Leu	Ser	Ser	Gly	Ser	Gln
145					150					155					160
Glu	Ser	Asp	Ser	Ser	Gln	Ser	Ala	Lys	Lys	Asp	Met	Leu	Ala	Ala	Leu
				165					170					175	
Lys	Ser	Arg	Gln	Glu	Ala	Leu	Glu	Glu	Thr	Leu	Arg	Gln	Arg	Leu	Glu
			180					185					190		
Glu	Leu	Lys	Lys	Leu	Cys	Leu	Arg	Glu	Ala	Glu	Leu	Thr	Gly	Lys	Leu
	195						200				205				
Pro	Val	Glu	Tyr	Pro	Leu	Asp	Pro	Gly	Glu	Glu	Pro	Pro	Ile	Val	Arg
	210					215					220				
Arg	Arg	Ile	Gly	Thr	Ala	Phe	Lys	Leu	Asp	Glu	Gln	Lys	Ile	Leu	Pro
225					230					235					240
Lys	Gly	Glu	Glu	Ala	Glu	Leu	Glu	Arg	Leu	Glu	Arg	Glu	Phe	Ala	Ile
				245					250					255	
Gln	Ser	Gln	Ile	Thr	Glu	Ala	Ala	Arg	Arg	Leu	Ala	Ser	Asp	Pro	Asn
			260					265					270		

&lt;210&gt; 3613

&lt;211&gt; 659

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3613

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120  
cacctggatc cctgcagccc agcctggaat gcgtctggat taggggaaag acgagaaacg  
180  
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240  
tactgtatct agtgcttctg ctcttatctt caatcgtggg gttcttttta atgcaaagt  
300  
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360  
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420  
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480  
gtcccagagc acaccgtccc cctttaacag caactggagc ttggattcgc tcttatattg  
540  
tacagtcctt tcgaccattg ccctggagca cccgcacacg cgcacgcac tccggccgcg  
600  
ctcacacaca ctacacaca cgcacgcaaa cgcggtcgga gaagagccc cccccccc  
659

&lt;210&gt; 3614

&lt;211&gt; 123

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3614

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Met Gln Ser Val Thr Arg Pro Gly Ile Pro Met Cys Ala Gln Leu Ala
 1           5           10           15
His Ser Ile Ile Val Pro Arg Lys Leu Leu Gln Phe Ile Lys Ser Ser
          20           25           30
Gly Leu Gly Ile Ser Leu Asn Ser Lys Arg Arg Lys Glu Glu Thr Phe
          35           40           45
Pro Thr Arg Cys Gly Cys Asp Ala Ser Gln Gly Pro Gln Gly His Cys
          50           55           60
Pro Arg Ala His Arg Pro Pro Leu Thr Ala Thr Gly Ala Trp Ile Arg
65           70           75           80
Ser Tyr Ile Val Gln Ser Phe Arg Pro Leu Pro Trp Ser Thr Arg Thr
          85           90           95
Arg Ala Arg Ile Ser Gly Arg Ala His Thr His Ser Tyr Thr Arg Thr
          100          105          110
Gln Thr Arg Ser Glu Lys Ser Pro Pro Pro Pro
          115          120

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&lt;210&gt; 3615

&lt;211&gt; 1388

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3615

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agccggtacc ggcaaccacg ggcagctctc agggaatctc cgtcgtgagg ccagaggctc
120
cagtccccgc gagtccagat gcctgtccag cctccaagca aagacacaga agagatggaa
180
gcagaggggtg attctgctgc tgagatgaat ggggaggagg aagagagtga ggaggagcgg
240
agcggcagcc agacagagtc agaagaggag agctccgaga tggatgatga ggactatgag
300
cgacgccgca gcgagtgtgt cagtgagatg ctggacctag agaagcagtt ctccggagcta
360
aaggagaagt tgttcaggga acgactgagt cagctgcggt tgcggctgga ggaagtgggg
420
gctgagagag cccctgaata cacggagccc cttggggggc tgcagcggag cctcaagatt
480
cgcatcagg tggcagggat ctacaagggc ttctgtctgg atgtgatcag gaataagtac
540
gaatgtgagc tgcaggggag caaacagcac ctggagagtg agaagctgct gctctatgac
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660
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720
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780
tacatgcttc aagagatcgg catcctggag gactggacag ccatcaaaaa ggctagggca
840
gctgtgtccc ctcagaagag aaaatcggat gacaggcgga cccacaggcc cctcagggtc
900

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 1080  
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 1380  
 aaaaaaaaa  
 1388

&lt;210&gt; 3616

&lt;211&gt; 290

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3616

Met	Pro	Val	Gln	Pro	Pro	Ser	Lys	Asp	Thr	Glu	Glu	Met	Glu	Ala	Glu
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Gly	Asp	Ser	Ala	Ala	Glu	Met	Asn	Gly	Glu	Glu	Glu	Glu	Ser	Glu	Glu
			20					25					30		
Glu	Arg	Ser	Gly	Ser	Gln	Thr	Glu	Ser	Glu	Glu	Glu	Ser	Ser	Glu	Met
		35					40					45			
Asp	Asp	Glu	Asp	Tyr	Glu	Arg	Arg	Arg	Ser	Glu	Cys	Val	Ser	Glu	Met
	50					55					60				
Leu	Asp	Leu	Glu	Lys	Gln	Phe	Ser	Glu	Leu	Lys	Glu	Lys	Leu	Phe	Arg
65					70					75					80
Glu	Arg	Leu	Ser	Gln	Leu	Arg	Leu	Arg	Leu	Glu	Glu	Val	Gly	Ala	Glu
				85					90					95	
Arg	Ala	Pro	Glu	Tyr	Thr	Glu	Pro	Leu	Gly	Gly	Leu	Gln	Arg	Ser	Leu
			100					105					110		
Lys	Ile	Arg	Ile	Gln	Val	Ala	Gly	Ile	Tyr	Lys	Gly	Phe	Cys	Leu	Asp
		115					120					125			
Val	Ile	Arg	Asn	Lys	Tyr	Glu	Cys	Glu	Leu	Gln	Gly	Ala	Lys	Gln	His
	130					135					140				
Leu	Glu	Ser	Glu	Lys	Leu	Leu	Leu	Tyr	Asp	Thr	Leu	Gln	Gly	Glu	Leu
145					150				155					160	
Gln	Glu	Arg	Ile	Gln	Arg	Leu	Glu	Glu	Asp	Arg	Gln	Ser	Leu	Asp	Leu
				165					170					175	
Ser	Ser	Glu	Trp	Trp	Asp	Asp	Lys	Leu	His	Ala	Arg	Gly	Ser	Ser	Arg
		180						185					190		
Ser	Trp	Asp	Ser	Leu	Pro	Pro	Ser	Lys	Arg	Lys	Lys	Ala	Pro	Leu	Val
		195					200					205			
Ser	Gly	Pro	Tyr	Ile	Val	Tyr	Met	Leu	Gln	Glu	Ile	Gly	Ile	Leu	Glu
	210					215					220				
Asp	Trp	Thr	Ala	Ile	Lys	Lys	Ala	Arg	Ala	Ala	Val	Ser	Pro	Gln	Lys

225                                      230                                      235                                      240  
 Arg Lys Ser Asp Asp Arg Arg Thr His Arg Pro Leu Arg Val Cys Pro  
    245                                      250                                      255  
 Ala Arg Leu Leu Trp Cys Cys Trp Ala Leu Pro Leu His Leu Ala Leu  
    260                                      265                                      270  
 Ala Trp Thr Pro Pro Leu Pro Ser Ser Arg Pro Ala Gln Leu Trp Pro  
    275                                      280                                      285  
 Trp Ser  
    290

<210> 3617  
 <211> 804  
 <212> DNA  
 <213> Homo sapiens

<400> 3617  
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 120  
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 180  
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 240  
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 300  
 gggaatggtt taggtccttg catctttgaa ggggttgga gggctggcag gaggcactga  
 360  
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 420  
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 480  
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 540  
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 600  
 gtgcccttct tcatcggtgt cagcaagatc gacctatgtg ccaagaccac agtggagagg  
 660  
 acagtacgcc agctggagcg ggtcctcaag cagcctggct gccacaaggt ccccatgctg  
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<210> 3618  
 <211> 148  
 <212> PRT  
 <213> Homo sapiens

<400> 3618  
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 Ala Glu Glu Ile Cys Glu Ser Ser Ser Lys Met Ile Thr Phe Ile Asp



			20					25					30				
Leu	Ala	Gly	His	His	Lys	Tyr	Leu	His	Thr	Thr	Ile	Phe	Gly	Leu	Thr		
		35					40					45					
Ser	Tyr	Cys	Pro	Asp	Cys	Ala	Leu	Leu	Leu	Val	Ser	Ala	Asn	Thr	Gly		
	50					55					60						
Ile	Ala	Gly	Thr	Thr	Arg	Glu	His	Leu	Gly	Leu	Ala	Leu	Ala	Leu	Lys		
65					70					75					80		
Val	Pro	Phe	Phe	Ile	Val	Val	Ser	Lys	Ile	Asp	Leu	Cys	Ala	Lys	Thr		
				85					90					95			
Thr	Val	Glu	Arg	Thr	Val	Arg	Gln	Leu	Glu	Arg	Val	Leu	Lys	Gln	Pro		
		100					105						110				
Gly	Cys	His	Lys	Val	Pro	Met	Leu	Val	Thr	Ser	Glu	Asp	Asp	Ala	Val		
	115						120					125					
Thr	Ala	Ala	Gln	Gln	Phe	Ala	Gln	Ser	Pro	Asn	Val	Thr	Pro	Ile	Phe		
	130					135					140						
Thr	Leu	Ser	Ser														
145																	

&lt;210&gt; 3619

&lt;211&gt; 948

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3619

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 120  
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 180  
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 240  
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948

<210> 3620  
<211> 159  
<212> PRT  
<213> Homo sapiens

<400> 3620  
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35 40 45  
Pro Gly Ala Ser Ser Gln Pro Cys Ser Thr Tyr Pro Pro Trp Arg Thr  
50 55 60  
Thr Thr Leu Ser Thr Ser Thr Ser Trp Ser Cys Leu Leu Leu Pro Cys  
65 70 75 80  
Ala Ser Cys Pro Ser Arg Cys Ser Cys Gln Thr Trp Pro Ser Ser Pro  
85 90 95  
Thr Ala Ser Thr Pro Thr Thr Ser Cys Thr Ser Phe Met Thr Thr Cys  
100 105 110  
Cys His Ser Ser Thr Pro Cys Gly Ser Phe Pro Ala Trp Pro Thr Arg  
115 120 125  
His Gly Ser Ser Ser Trp Arg Ala Gly Ala Arg Val His Thr Ser Thr  
130 135 140  
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145 150 155

<210> 3621  
<211> 2934  
<212> DNA  
<213> Homo sapiens

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ccttaattgg gcttgcagtg ctaaaaagca gatcggttctc tctgagggtt tcccaacagt  
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300  
aacataataa gaccttgcc agcacattac agaataattt tggtgaacct tcttgagaat  
360  
tcagagaaac tgctgagtga cactgaacg aaaagatcta atcttaaggc ttacgcgtgt  
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660  
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1380  
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1740  
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1860  
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1920  
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&lt;210&gt; 3622

&lt;211&gt; 228

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3622

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Leu	Gln	Ala	Cys	Ile	Asp	Gly	Asp	Phe	Asn	Tyr	Ser	Lys	Arg	Leu	Leu
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Glu	Ser	Gly	Phe	Asp	Pro	Asn	Ile	Arg	Asp	Ser	Arg	Gly	Arg	Thr	Gly
		35					40					45			
Leu	His	Leu	Ala	Ala	Ala	Arg	Gly	Asn	Val	Asp	Ile	Cys	Gln	Leu	Leu
		50				55				60					
His	Lys	Phe	Gly	Ala	Asp	Leu	Leu	Ala	Thr	Asp	Tyr	Gln	Gly	Asn	Thr
65				70					75					80	
Ala	Leu	His	Leu	Cys	Gly	His	Val	Asp	Thr	Ile	Gln	Phe	Leu	Val	Ser
			85					90					95		
Asn	Gly	Leu	Lys	Ile	Asp	Ile	Cys	Asn	His	Gln	Gly	Ala	Thr	Pro	Leu
		100					105					110			
Val	Leu	Ala	Lys	Arg	Arg	Gly	Val	Asn	Lys	Asp	Val	Ile	Arg	Leu	Leu
		115				120						125			
Glu	Ser	Leu	Glu	Glu	Gln	Glu	Val	Lys	Gly	Phe	Asn	Arg	Gly	Thr	His
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Ser	Lys	Leu	Glu	Thr	Met	Gln	Thr	Ala	Glu	Ser	Glu	Ser	Ala	Met	Glu
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Ser	His	Ser	Leu	Leu	Asn	Pro	Asn	Leu	Gln	Gln	Gly	Glu	Gly	Val	Leu

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<210> 3623  
 <211> 586  
 <212> DNA  
 <213> Homo sapiens

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 Arg Asp Ile Thr Lys Glu Glu Ile Ser Lys Phe Ser Lys Ala Glu Trp  
 35 40 45  
 Glu Lys Lys Arg Met Asp Lys Ala Ile Gly Tyr Ser Phe Ala Ile Val  
 50 55 60  
 Gly Ile Asn Ile Thr Asp Leu Ala Tyr Asn Leu Leu Val Ser Gly Ala  
 65 70 75 80  
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				85					90					95					
His	Phe	Gln	Gln	Thr	Phe	Cys	Tyr	Leu	Met	His	Glu	Phe	His	Lys	Phe				
				100					105					110					
Trp	Ile	Glu	Glu	Asp	Pro	Met	Asp	Ile	Met	Glu	Phe	Asn	Arg	Val	Arg				
			115					120					125						
Glu	Lys	Phe	Arg	Lys	Arg	Ile	Ile	Lys	Gln	Leu	Gln	Asn	Pro	Asp	Met				
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&lt;210&gt; 3625

&lt;211&gt; 4799

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3625

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<211> 551

<212> PRT

<213> Homo sapiens

<400> 3626

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Trp	Gly	Pro	Ser	Ser	Ser	Leu	Met	Ser	Glu	Ile	Ala	Asp	Leu	Thr	Tyr
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Asn	Val	Val	Ala	Phe	Ser	Glu	Ile	Met	Ser	Met	Ile	Trp	Lys	Arg	Leu
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Asn	Asp	His	Gly	Lys	Asn	Trp	Arg	His	Val	Tyr	Lys	Ala	Met	Thr	Leu
65					70					75					80
Met	Glu	Tyr	Leu	Ile	Lys	Thr	Gly	Ser	Glu	Arg	Val	Ser	Gln	Gln	Cys
			85						90				95		
Lys	Glu	Asn	Met	Tyr	Ala	Val	Gln	Thr	Leu	Lys	Asp	Phe	Gln	Tyr	Val
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Ala	His	Ala	Leu	Lys	Thr	Lys	Glu	Lys	Leu	Ala	Gln	Thr	Ala	Thr	Ala
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Ser	Ser	Ala	Ala	Val	Gly	Ser	Gly	Pro	Pro	Pro	Glu	Ala	Glu	Gln	Ala
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Trp	Pro	Gln	Ser	Ser	Gly	Glu	Glu	Glu	Leu	Gln	Leu	Gln	Leu	Ala	Leu
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Ala	Met	Ser	Lys	Glu	Glu	Ala	Asp	Gln	Glu	Glu	Arg	Ile	Arg	Arg	Gly
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Ala	Pro	Ala	Pro	Ala	Pro	Thr	Thr	Asp	Pro	Trp	Gly	Gly	Pro	Ala	Pro
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 340 345 350  
 Pro Trp Gly Gly Ser Pro Ala Lys Pro Ser Thr Asn Gly Thr Thr Thr  
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 Ser Gly Val Arg Gly Ser Leu Ala Glu Ala Val Gly Ser Pro Pro Pro  
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 485 490 495  
 Pro Ala Pro Pro Ala Thr Leu Thr Leu Asn Gln Leu Arg Leu Ser Pro  
 500 505 510  
 Val Pro Pro Val Pro Gly Ala Pro Pro Thr Tyr Ile Ser Pro Leu Gly  
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&lt;210&gt; 3627

&lt;211&gt; 1760

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3627

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&lt;210&gt; 3628

&lt;211&gt; 440

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3628

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 Asp Gln Asp Ser Lys Glu Ala Lys Lys Pro Asn Ile Ile Asn Phe Asp  
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 Thr Ser Leu Pro Thr Ser His Thr Tyr Leu Gly Ala Asp Met Glu Glu  
 50 55 60  
 Phe His Gly Arg Thr Leu His Asp Asp Asp Ser Cys Gln Val Ile Pro  
 65 70 75 80  
 Val Leu Pro Gln Val Met Met Ile Leu Ile Pro Gly Gln Thr Leu Pro  
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 Leu Gln Leu Phe His Pro Gln Glu Val Ser Met Val Arg Asn Leu Ile  
 100 105 110  
 Gln Lys Asp Arg Thr Phe Ala Val Leu Ala Tyr Ser Asn Val Gln Glu  
 115 120 125  
 Arg Glu Ala Gln Phe Gly Thr Thr Ala Glu Ile Tyr Ala Tyr Arg Glu  
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 Glu Gln Asp Phe Gly Ile Glu Ile Val Lys Val Lys Ala Ile Gly Arg  
 145 150 155 160  
 Gln Arg Phe Lys Val Leu Glu Leu Arg Thr Gln Ser Asp Gly Ile Gln  
 165 170 175  
 Gln Ala Lys Val Gln Ile Leu Pro Glu Cys Val Leu Pro Ser Thr Met  
 180 185 190  
 Ser Ala Val Gln Leu Glu Ser Leu Asn Lys Cys Gln Ile Phe Pro Ser  
 195 200 205  
 Lys Pro Val Ser Arg Glu Asp Gln Cys Ser Tyr Lys Trp Trp Gln Lys  
 210 215 220  
 Tyr Gln Lys Arg Lys Phe His Cys Ala Asn Leu Thr Ser Trp Pro Arg  
 225 230 235 240  
 Trp Leu Tyr Ser Leu Tyr Asp Ala Glu Thr Leu Met Asp Arg Ile Lys  
 245 250 255  
 Lys Gln Leu Arg Glu Trp Asp Glu Asn Leu Lys Asp Asp Ser Leu Pro  
 260 265 270  
 Ser Asn Pro Ile Asp Phe Ser Tyr Arg Val Ala Ala Cys Leu Pro Ile  
 275 280 285  
 Asp Asp Val Leu Arg Ile Gln Leu Leu Lys Ile Gly Ser Ala Ile Gln  
 290 295 300  
 Arg Leu Arg Cys Glu Leu Asp Ile Met Asn Lys Cys Thr Ser Leu Cys  
 305 310 315 320  
 Cys Lys Gln Cys Gln Glu Thr Glu Ile Thr Thr Lys Asn Glu Ile Phe  
 325 330 335  
 Ser Leu Ser Leu Cys Gly Pro Met Ala Ala Tyr Val Asn Pro His Gly  
 340 345 350  
 Tyr Val His Glu Thr Leu Thr Val Tyr Lys Ala Cys Asn Leu Asn Leu  
 355 360 365  
 Ile Gly Arg Pro Ser Thr Glu His Ser Trp Phe Pro Gly Tyr Ala Trp  
 370 375 380  
 Thr Val Ala Gln Cys Lys Ile Cys Ala Ser His Ile Gly Trp Lys Phe  
 385 390 395 400  
 Thr Ala Thr Lys Lys Asp Met Ser Pro Gln Lys Phe Trp Gly Leu Thr

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Arg Ser Ala Leu Leu Pro Thr Ile	Pro Asp Thr Glu Asp Glu Ile Ser		
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Pro Asp Lys Val Ile Leu Cys Leu			
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<210> 3629  
 <211> 695  
 <212> DNA  
 <213> Homo sapiens

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 180  
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 420  
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 480  
 caagttgagt gactctgggc aggtttcttg acctgtttct tcttttgtat aaaatgtggg  
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 600  
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<210> 3630  
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 <212> PRT  
 <213> Homo sapiens

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 Ser Tyr Phe Leu Phe Val Ile Phe Thr Ala Tyr Ala Met Leu Pro Leu  
 35 40 45  
 Gly Met Arg Asp Ala Ala Val Ala Gly Leu Ala Ser Ser Leu Ser His  
 50 55 60  
 Leu Leu Val Leu Gly Leu Tyr Leu Gly Pro Gln Pro Asp Ser Arg Pro  
 65 70 75 80  
 Ala Leu Leu Pro Gln Leu Ala Ala Asn Ala Val Leu Phe Leu Cys Gly

				85					90					95	
Asn	Val	Ala	Gly	Val	Tyr	His	Lys	Ala	Leu	Met	Glu	Arg	Ala	Leu	Arg
				100				105					110		
Ala	Thr	Phe	Arg	Glu	Ala	Leu	Ser	Ser	Leu	His	Ser	Arg	Arg	Arg	Leu
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<210> 3631  
 <211> 864  
 <212> DNA  
 <213> Homo sapiens

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 180  
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 360  
 agaacctact tcaagaaaag gctacagcag cacaaggatg aggacctctc cagcctggtc  
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 480  
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 660  
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 720  
 atgctacctg catctgctc agcacctgta ccagatccca acaaccacc tgcacaggag  
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<210> 3632  
 <211> 222  
 <212> PRT  
 <213> Homo sapiens

<400> 3632  
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<210> 3633
<211> 1570
<212> DNA
<213> Homo sapiens
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180
ctgtgtgaag atggcatttc tctactgatta ttggaaaagc acaagagcca cgtgctggag
240
ccattgtcca gccttgccct ggaggagcag tgtctggctt tgtccctaga ttggtccact
300
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360
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420
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480
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540
ctcttcacca gcnaaaagac acaccatnng ggtgtgtgca gcatccagag cagccctcat
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660

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780  
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960  
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1140  
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1380  
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<210> 3634  
<211> 277  
<212> PRT  
<213> Homo sapiens

<400> 3634  
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Glu Ile Val Tyr Ser Gly Gly Asp Asp Gly Leu Leu Arg Gly Trp Asp  
35 40 45  
Thr Arg Val Pro Gly Lys Phe Leu Phe Thr Ser Xaa Lys Thr His His  
50 55 60  
Xaa Gly Val Cys Ser Ile Gln Ser Ser Pro His Arg Glu His Ile Leu  
65 70 75 80  
Ala Thr Gly Ser Tyr Asp Glu His Ile Leu Leu Trp Asp Thr Arg Asn  
85 90 95  
Met Lys Gln Pro Leu Ala Asp Thr Pro Val Gln Gly Gly Val Trp Arg  
100 105 110  
Ile Lys Trp His Pro Phe His His His Leu Leu Leu Ala Ala Cys Met

2791

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<210> 3636

<211> 278

<212> PRT

<213> Homo sapiens

<400> 3636

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			20					25					30		
Ala	Arg	Leu	Gln	Gln	Val	Asp	Pro	Val	Leu	Leu	Lys	Asp	Glu	Pro	Gln
			35				40					45			
Gln	Thr	Ala	Ala	Gln	Met	Gly	Cys	Ala	Pro	Ile	Gln	Pro	Leu	Ala	Met
	50					55					60				
Pro	Gln	Ala	Leu	Pro	Leu	Ala	Ala	Gly	Pro	Leu	Pro	Pro	Gly	Ser	Ile
65					70					75				80	
Ala	Asn	Leu	Thr	Glu	Leu	Gln	Gly	Val	Ile	Val	Gly	Gln	Pro	Val	Leu
			85						90					95	
Gly	Gln	Ala	Gln	Leu	Ala	Gly	Leu	Gly	Gln	Gly	Ile	Leu	Thr	Glu	Thr
			100					105						110	
Gln	Gln	Gly	Leu	Met	Val	Ala	Ser	Pro	Ala	Gln	Thr	Leu	Asn	Asp	Thr
		115					120						125		
Leu	Asp	Asp	Ile	Met	Ala	Ala	Val	Ser	Gly	Arg	Ala	Ser	Ala	Met	Ser
	130					135					140				
Asn	Thr	Pro	Thr	His	Ser	Ile	Ala	Ala	Ser	Ile	Ser	Gln	Pro	Gln	Thr
145					150					155					160
Pro	Thr	Pro	Ser	Pro	Ile	Ile	Ser	Pro	Ser	Ala	Met	Leu	Pro	Ile	Tyr
			165						170					175	
Pro	Ala	Ile	Asp	Ile	Asp	Ala	Gln	Thr	Glu	Ser	Asn	His	Asp	Thr	Ala
			180					185					190		
Leu	Thr	Leu	Ala	Cys	Ala	Gly	Gly	His	Glu	Glu	Leu	Val	Gln	Thr	Leu
		195				200						205			
Leu	Glu	Arg	Gly	Ala	Ser	Ile	Glu	His	Arg	Asp	Lys	Lys	Gly	Phe	Thr
	210					215					220				
Pro	Leu	Ile	Leu	Ala	Ala	Thr	Ala	Gly	His	Val	Gly	Val	Val	Glu	Ile
225					230					235					240
Leu	Leu	Asp	Asn	Gly	Ala	Asp	Ile	Glu	Ala	Gln	Ser	Glu	Arg	Thr	Lys
			245					250					255		
Asp	Thr	Pro	Leu	Ser	Leu	Ala	Cys	Ser	Gly	Gly	Arg	Gln	Glu	Val	Val
			260					265					270		
Glu	Leu	Leu	Leu	Ala	Arg										
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<210> 3637

<211> 2128

<212> DNA

<213> Homo sapiens

<400> 3637

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120  
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240  
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660  
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720  
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 1920  
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 1980  
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 2040  
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<210> 3638  
 <211> 200  
 <212> PRT  
 <213> Homo sapiens

<400> 3638  
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 Leu Trp Gly Ser Gln Leu Gly Lys Pro Val Ser Phe Gly Thr Phe Arg  
 35 40 45  
 Arg Cys Ser Tyr Pro Val His Asp Glu Ser Arg Gln Met Met Val Met  
 50 55 60  
 Val Glu Glu Cys Gly Arg Tyr Ala Ser Phe Gln Gly Ile Pro Ser Ala  
 65 70 75 80  
 Glu Trp Arg Ile Cys Thr Ile Val Thr Gly Leu Gly Cys Gly Leu Leu  
 85 90 95  
 Leu Leu Val Ala Leu Thr Ala Leu Met Gly Cys Cys Val Ser Asp Leu  
 100 105 110  
 Ile Ser Arg Thr Val Gly Arg Val Ala Gly Gly Ile Gln Phe Leu Gly  
 115 120 125  
 Gly Leu Leu Ile Gly Ala Gly Cys Ala Leu Tyr Pro Leu Gly Trp Asp  
 130 135 140  
 Ser Glu Glu Val Arg Gln Thr Cys Gly Tyr Thr Ser Gly Gln Phe Asp  
 145 150 155 160  
 Leu Gly Lys Cys Glu Ile Gly Trp Ala Tyr Tyr Cys Thr Gly Ala Gly  
 165 170 175  
 Ala Thr Ala Ala Met Leu Leu Cys Thr Trp Leu Ala Cys Phe Ser Gly  
 180 185 190  
 Lys Lys Gln Lys His Tyr Pro Tyr  
 195 200

<210> 3639  
 <211> 726  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 3639

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 aagactaaca gtgggttatct ctcagcggga ttataaatgt tttgggtttt tttttttttt  
 180  
 tgtacatttt agtatttttt gaaatttttt taataagcgt gtattacata cagtaaacia  
 240  
 aagcacatta atgtaggcag attatcaatg ttatgcattt cactgattgc atatctcttt  
 300  
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 360  
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 420  
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 720  
 taagat  
 726

&lt;210&gt; 3640

&lt;211&gt; 102

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3640

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Ser	Leu	Ile	Met	Lys	Glu	Met	Pro	Trp	Arg	Thr	Gln	His	Pro	Asn	Phe
			20					25					30		
Ser	Leu	Leu	Asn	Pro	Leu	Lys	Gly	Glu	Ile	Phe	Leu	Leu	Pro	Ala	Arg
		35					40					45			
Val	Tyr	Gly	Asp	Asp	Thr	Leu	Arg	Pro	Cys	Trp	Cys	Trp	Lys	Asn	His
	50				55					60					
Leu	Trp	Gln	Cys	His	Phe	Leu	Arg	Lys	Thr	Tyr	Gln	Ser	Phe	Ala	Met
65				70					75					80	
Phe	Thr	Ile	Asp	Lys	Lys	Arg	Asp	Met	Gln	Ser	Val	Lys	Cys	Ile	Thr
			85					90						95	
Leu	Ile	Ile	Cys	Leu	His										
			100												

&lt;210&gt; 3641

&lt;211&gt; 455

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens



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 180  
 gagctcgaga cgctcgcgcg ctcacctctt gggcccctgt gcgtggggaa gtcaggaaga  
 240  
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 360  
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 455

<210> 3642  
 <211> 148  
 <212> PRT  
 <213> Homo sapiens

<400> 3642  
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 Gln Ser Pro Glu Glu Ser Arg Ser Ser His Ala Ser Arg Asp Leu Ala  
 35 40 45  
 Pro Leu Glu Arg Arg Ser Gly Arg Gly Ala Arg Asp Ala Arg Ala Leu  
 50 55 60  
 Thr Ser Trp Ala Pro Val Arg Gly Glu Val Arg Lys Lys Thr Pro Ser  
 65 70 75 80  
 Glu Val Thr Val Pro Thr Arg Val Asp Ser Pro Arg Pro Asp His Ala  
 85 90 95  
 Arg Arg Trp Pro Lys Gly Arg Gly Trp Gly Arg Gly Cys Ser Ala Pro  
 100 105 110  
 Ser Ser Arg Ala Ala Ser Leu Gln Val Phe Ala Leu Ala Arg Arg Ser  
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 Pro Arg Glu Gln Phe Gly Thr Val Arg Ile Gly Phe Arg Glu Pro Ala  
 130 135 140  
 Phe Lys Thr Arg  
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<210> 3643  
 <211> 2243  
 <212> DNA  
 <213> Homo sapiens

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<210> 3644
<211> 560
<212> PRT
<213> Homo sapiens
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<400> 3644																
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			20					25					30			
Asp	Met	Ser	Asp	Arg	Arg	Ala	Ala	Val	Ile	Phe	Ala	Asp	Thr	Leu	Thr	
		35					40					45				
Leu	Leu	Phe	Glu	Gly	Ile	Ala	Arg	Ile	Val	Glu	Thr	His	Gln	Pro	Ile	
	50					55					60					
Val	Glu	Thr	Tyr	Tyr	Gly	Pro	Gly	Arg	Leu	Tyr	Thr	Leu	Ile	Lys	Tyr	
65					70					75					80	
Leu	Gln	Val	Glu	Cys	Asp	Arg	Gln	Val	Glu	Lys	Val	Val	Asp	Lys	Phe	
				85					90					95		
Ile	Lys	Gln	Arg	Asp	Tyr	His	Gln	Gln	Phe	Arg	His	Val	Gln	Asn	Asn	
			100					105					110			
Leu	Met	Arg	Asn	Ser	Thr	Thr	Glu	Lys	Ile	Glu	Pro	Arg	Glu	Leu	Asp	
		115					120					125				
Pro	Ile	Leu	Thr	Glu	Val	Thr	Leu	Met	Asn	Ala	Arg	Ser	Glu	Leu	Tyr	
	130					135					140					
Leu	Arg	Phe	Leu	Lys	Lys	Arg	Ile	Ser	Ser	Asp	Phe	Glu	Val	Gly	Asp	
145					150					155					160	
Ser	Met	Ala	Ser	Glu	Glu	Val	Lys	Gln	Glu	His	Gln	Lys	Cys	Leu	Asp	
				165					170					175		
Lys	Leu	Leu	Asn	Asn	Cys	Leu	Leu	Ser	Cys	Thr	Met	Gln	Glu	Leu	Ile	
			180					185					190			
Gly	Leu	Tyr	Val	Thr	Met	Glu	Glu	Tyr	Phe	Met	Arg	Glu	Thr	Val	Asn	
	195					200					205					
Lys	Ala	Val	Ala	Leu	Asp	Thr	Tyr	Glu	Lys	Gly	Gln	Leu	Thr	Ser	Ser	

210	215	220
Met Val Asp Asp Val Phe Tyr Ile Val Lys Lys Cys Ile Gly Arg Ala		
225	230	235
Leu Ser Ser Ser Ser Ile Asp Cys Leu Cys Ala Met Ile Asn Leu Ala		240
	245	250
Thr Thr Glu Leu Glu Ser Asp Phe Arg Asp Val Leu Cys Asn Lys Leu		255
	260	265
Arg Met Gly Phe Pro Ala Thr Thr Phe Gln Asp Ile Gln Arg Gly Val		270
	275	280
Thr Ser Ala Val Asn Ile Met His Ser Ser Leu Gln Gln Gly Lys Phe		285
	290	295
Asp Thr Lys Gly Ile Glu Ser Thr Asp Glu Ala Lys Met Ser Phe Leu		300
305	310	315
Val Thr Leu Asn Asn Val Glu Val Cys Ser Glu Asn Ile Ser Thr Leu		320
	325	330
Lys Lys Thr Leu Glu Ser Asp Cys Thr Lys Leu Phe Ser Gln Gly Ile		335
	340	345
Gly Gly Glu Gln Ala Gln Ala Lys Phe Asp Ser Cys Leu Ser Asp Leu		350
	355	360
Ala Ala Val Ser Asn Lys Phe Arg Asp Leu Leu Gln Glu Gly Leu Thr		365
	370	375
Glu Leu Asn Ser Thr Ala Ile Lys Pro Gln Val Gln Pro Trp Ile Asn		380
385	390	395
Ser Phe Phe Ser Val Ser His Asn Ile Glu Glu Glu Glu Phe Asn Asp		400
	405	410
Tyr Glu Ala Asn Asp Pro Trp Val Gln Gln Phe Ile Leu Asn Leu Glu		415
	420	425
Gln Gln Met Ala Glu Phe Lys Ala Ser Leu Ser Pro Val Ile Tyr Asp		430
	435	440
Ser Leu Thr Gly Leu Met Thr Ser Leu Val Ala Val Glu Leu Glu Lys		445
	450	455
Val Val Leu Lys Ser Thr Phe Asn Arg Leu Gly Gly Leu Gln Phe Asp		460
465	470	475
Lys Glu Leu Arg Ser Leu Ile Ala Tyr Leu Thr Thr Val Thr Thr Trp		480
	485	490
Thr Ile Arg Asp Lys Phe Ala Arg Leu Ser Gln Met Ala Thr Ile Leu		495
	500	505
Asn Leu Glu Arg Val Thr Glu Ile Leu Asp Tyr Trp Gly Pro Asn Ser		510
	515	520
Gly Pro Leu Thr Trp Arg Leu Thr Pro Ala Glu Val Arg Gln Val Leu		525
	530	535
Ala Leu Arg Ile Asp Phe Arg Ser Glu Asp Ile Lys Arg Leu Arg Leu		540
545	550	555
		560

&lt;210&gt; 3645

&lt;211&gt; 823

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3645

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60

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120

tcgggttgat ttcctcatct tctatttgat gggctaactg ctctatggaa ggaagatctt  
 180  
 cctcctcctt ggaggctaag atttggcgta actctttcct gagatcaata aaacgatcgt  
 240  
 ggaacagggc caggcaccac ggctcgggtga agtagctata gagatctgtg atcagggtttt  
 300  
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 823

&lt;210&gt; 3646

&lt;211&gt; 243

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3646

Met	Asn	Gly	Pro	Thr	Ser	Asn	Phe	Ser	Ser	Lys	Glu	Ile	Gly	Phe	Gln
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Leu	Ala	Ala	Ala	Met	Leu	His	Leu	Phe	Asp	Pro	Thr	Leu	Glu	Pro	Val
			20					25					30		
Thr	Glu	Pro	Pro	Ala	Asn	Leu	Asp	Arg	Leu	Ile	Pro	Met	Tyr	Lys	Gly
		35					40					45			
Ala	Lys	Ile	Gln	Gly	Gly	Ile	Leu	Pro	Gly	Ser	Tyr	His	Tyr	Leu	His
	50					55					60				
Ile	Ala	Lys	Pro	Ala	Ile	Pro	Thr	Pro	Leu	Glu	Val	Gln	Met	Ala	Gln
65					70				75					80	
Pro	Asn	Tyr	Gly	Leu	Glu	Leu	Val	Thr	Gly	Ser	Ala	Lys	Asn	Gly	Thr
			85					90					95		
Tyr	Phe	Arg	Ile	His	Ile	Asn	Lys	Tyr	Lys	Met	Val	Glu	Thr	Ile	Thr
		100					105					110			
Cys	Leu	Ser	Arg	Glu	Pro	Phe	Pro	Ala	Ser	Asn	Tyr	Ile	Arg	Leu	Phe
		115					120					125			
Gly	Gln	His	Glu	Gln	Leu	Leu	Asn	Asn	Leu	Cys	Ala	Arg	Tyr	Asp	Glu
	130					135					140				
Asn	Leu	Ile	Thr	Asp	Leu	Tyr	Ser	Tyr	Phe	Thr	Glu	Pro	Trp	Cys	Leu
145				150					155					160	
Ala	Leu	Phe	His	Asp	Arg	Phe	Ile	Asp	Leu	Arg	Lys	Glu	Leu	Arg	Gln
			165					170						175	
Ile	Leu	Ala	Ser	Lys	Glu	Glu	Glu	Asp	Leu	Pro	Ser	Ile	Glu	Gln	Leu

	180		185		190										
Ala	His	Gln	Ile	Glu	Asp	Glu	Glu	Ile	Asn	Pro	Thr	Glu	Lys	Pro	Arg
	195					200						205			
Gln	Tyr	Leu	Lys	Arg	Val	Phe	Glu	Glu	Ser	Ile	Tyr	Lys	Thr	Leu	Val
	210					215						220			
Glu	Arg	Ser	Thr	Leu	Asp	Tyr	Leu	His	Tyr	Asn	Arg	Tyr	His	Leu	Pro
225					230					235					240
Met	Tyr	Ala													

&lt;210&gt; 3647

&lt;211&gt; 584

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3647

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240  
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584

&lt;210&gt; 3648

&lt;211&gt; 63

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3648

Thr	Arg	Arg	Ala	Ser	Ala	Ala	Pro	Thr	Gly	Pro	Phe	Phe	Cys	Ala	Thr
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Ala	Trp	Leu	Trp	Ala	Arg	Met	Pro	Leu	Ser	Ala	Val	Thr	Ser	His	Cys
		20						25					30		
Val	Ser	Ser	Arg	Trp	Arg	Ser	Pro	Thr	Arg	Ala	Pro	Thr	Pro	Ala	Thr
		35					40					45			
Cys	Thr	Thr	Ile	Thr	Val	Ala	Cys	Thr	Asn	Ala	Ala	Ser	Ser	Thr	
50						55					60				

&lt;210&gt; 3649

&lt;211&gt; 648

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3649

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gaagttctgt taactgatgg gaatgaaaag gccatcagaa atgtgcaaga catcatcaca  
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360  
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420  
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480  
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540  
tcaaacttcc actccaagtt gaaaaaggaa aaccgggaca tatatgaaga aaaccttcat  
600  
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648

&lt;210&gt; 3650

&lt;211&gt; 189

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3650

Met	Ile	Leu	Lys	Ala	Cys	His	Ser	Cys	Phe	His	Phe	His	Thr	Asp	Lys
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His	Ile	Cys	Ser	Leu	Phe	Ala	Val	Leu	Pro	Phe	Phe	Phe	Gln	Val	Ala
			20					25					30		
Ile	Ser	Ala	Asp	Val	Lys	Glu	Val	Leu	Leu	Thr	Asp	Gly	Asn	Glu	Lys
		35				40					45				
Ala	Ile	Arg	Asn	Val	Gln	Asp	Ile	Ile	Thr	Arg	Asn	Gln	Lys	Ala	Gly
	50				55					60					
Val	Phe	Lys	Thr	Gln	Lys	Ile	Ser	Ser	Cys	Val	Leu	Arg	Trp	Asp	Asn
65				70					75					80	
Glu	Thr	Asp	Val	Ser	Gln	Leu	Glu	Gly	His	Phe	Asp	Ile	Val	Met	Cys
			85					90					95		
Ala	Asp	Cys	Leu	Phe	Leu	Asp	Gln	Tyr	Arg	Ala	Ser	Leu	Val	Asp	Ala
		100					105					110			
Ile	Lys	Arg	Leu	Leu	Gln	Pro	Arg	Gly	Lys	Ala	Met	Val	Phe	Ala	Pro
	115				120						125				
Arg	Arg	Gly	Asn	Thr	Leu	Asn	Gln	Phe	Cys	Asn	Leu	Ala	Glu	Lys	Ala
	130				135						140				
Gly	Phe	Cys	Ile	Gln	Arg	His	Glu	Asn	Tyr	Asp	Glu	His	Ile	Ser	Asn
145			150					155					160		
Phe	His	Ser	Lys	Leu	Lys	Lys	Glu	Asn	Pro	Asp	Ile	Tyr	Glu	Glu	Asn



Leu His Tyr Pro Pro Leu Leu Ile Leu Thr Lys His Gly  
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180 185

<210> 3651  
<211> 2469  
<212> DNA  
<213> Homo sapiens

<400> 3651  
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240  
cacttcctcc actacagctc tgtggacaag gctaatacga aggaagtagg ccctcgtatg  
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360  
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420  
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480  
ctcaccaact tcatcagcga agccacagtg gagaagctac agcccagaaa tcgacagatc  
540  
tgtgcctttt ccgatgtgct acctgtgctc tccatgaagc acaccaagga ccgctggtgg  
600  
cagaatctac ccgctgtgg cattgagtgc aaaagctacc aagagggcct ggcccggcta  
660  
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720  
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780  
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960  
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1020  
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1080  
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accaagaagt tccggtggga ctttgctgcg gaacctgagg actgtgcccc ggtgggtggtg  
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1320

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1380  
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1680  
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1980  
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2100  
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2220  
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aaaaaaaaa  
2469

&lt;210&gt; 3652

&lt;211&gt; 384

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3652

Met	Ala	Ala	Val	Gln	Met	Asp	Pro	Glu	Leu	Ala	Lys	Arg	Leu	Phe	Phe
1				5					10					15	
Glu	Gly	Ala	Thr	Val	Val	Ile	Leu	Asn	Met	Pro	Lys	Gly	Thr	Glu	Phe
			20					25					30		
Gly	Ile	Asp	Tyr	Asn	Ser	Trp	Glu	Val	Gly	Pro	Lys	Phe	Arg	Gly	Val
		35					40					45			
Lys	Met	Ile	Pro	Pro	Gly	Ile	His	Phe	Leu	His	Tyr	Ser	Ser	Val	Asp

50	55	60
Lys Ala Asn Pro Lys Glu Val Gly Pro Arg Met Gly Phe Phe Leu Ser		
65	70	75
Leu His Gln Arg Gly Leu Thr Val Leu Arg Trp Ser Thr Leu Arg Glu		80
	85	90
Glu Val Asp Leu Ser Pro Ala Pro Glu Ser Glu Val Glu Ala Met Arg		95
	100	105
Ala Asn Leu Gln Glu Leu Asp Gln Phe Leu Gly Pro Tyr Pro Tyr Ala		110
	115	120
Thr Leu Lys Lys Trp Ile Ser Leu Thr Asn Phe Ile Ser Glu Ala Thr		125
	130	135
Val Glu Lys Leu Gln Pro Glu Asn Arg Gln Ile Cys Ala Phe Ser Asp		140
	145	150
Val Leu Pro Val Leu Ser Met Lys His Thr Lys Asp Arg Val Gly Gln		155
	160	165
Asn Leu Pro Arg Cys Gly Ile Glu Cys Lys Ser Tyr Gln Glu Gly Leu		170
	175	180
Ala Arg Leu Pro Glu Met Lys Pro Arg Ala Gly Thr Glu Ile Arg Phe		185
	190	195
Ser Glu Leu Pro Thr Gln Met Phe Pro Glu Gly Ala Thr Pro Ala Glu		200
	205	210
Ile Thr Lys His Ser Met Asp Leu Ser Tyr Ala Leu Glu Thr Val Leu		215
	220	225
Ile Lys Gln Phe Pro Ser Ser Pro Gln Asp Val Leu Gly Glu Leu Gln		230
	235	240
Phe Ala Phe Val Cys Phe Leu Leu Gly Asn Val Tyr Glu Ala Phe Glu		245
	250	255
His Trp Lys Arg Leu Leu His Leu Leu Cys Arg Ser Glu Ala Ala Met		260
	265	270
Met Lys His His Thr Leu Tyr Ile Asn Leu Met Ser Ile Leu Tyr His		275
	280	285
Gln Leu Gly Glu Ile Pro Ala Asp Phe Phe Val Asp Ile Val Ser Gln		290
	295	300
Asp Asn Phe Leu Thr Ser Thr Leu Gln Val Phe Phe Ser Ser Ala Cys		305
	310	315
Ser Ile Ala Val Asp Ala Thr Leu Arg Lys Lys Ala Glu Lys Phe Gln		320
	325	330
Ala His Leu Thr Lys Lys Phe Arg Trp Asp Phe Ala Ala Glu Pro Glu		335
	340	345
Asp Cys Ala Pro Val Val Val Glu Leu Pro Glu Gly Ile Glu Met Gly		350
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	365	370
	375	380

&lt;210&gt; 3653

&lt;211&gt; 283

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3653

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180

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283

<210> 3654  
<211> 88  
<212> PRT  
<213> Homo sapiens

<400> 3654  
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Ile Pro Ile Arg Ala Ser Phe Ala Ala Glu Met Glu Arg Cys His  
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Gln Ala Val Phe Ser Thr Gly Asp Ala Pro Ser Ala Gln Gln Asp Ala  
35 40 45  
Ser Ser Glu Leu Arg Leu His Ile Phe Ala Asp Trp Glu Glu Gly Arg  
50 55 60  
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Val Gly Ile Phe Ser Thr Pro Arg  
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<210> 3655  
<211> 3477  
<212> DNA  
<213> Homo sapiens

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240  
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2340

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&lt;210&gt; 3656

&lt;211&gt; 429

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3656

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Cys	Met	Ala	Ser	Leu	Phe	Pro	Ala	Trp	Glu	Pro	Pro	Leu	Ile	Thr	Leu
			20					25					30		
Lys	Ala	Gly	Thr	Gly	Ser	Met	Arg	Ser	Gly	Phe	Pro	Ala	Lys	Ser	Ala
		35					40					45			
Met	Trp	Arg	Tyr	Arg	Gly	Thr	Pro	Phe	Ser	Lys	Ala	Val	Glu	His	Ile
	50					55					60				
Asn	Lys	Thr	Ile	Ala	Pro	Ala	Leu	Val	Ser	Lys	Lys	Leu	Asn	Val	Thr

65 70 75 80  
Glu Gln Glu Lys Ile Asp Lys Leu Met Ile Glu Met Asp Gly Thr Glu  
85 90 95  
Asn Lys Ser Lys Phe Gly Ala Asn Ala Ile Leu Gly Val Ser Leu Ala  
100 105 110  
Val Cys Lys Ala Gly Ala Val Glu Lys Gly Val Pro Leu Tyr Arg His  
115 120 125  
Ile Ala Asp Leu Ala Gly Asn Ser Glu Val Ile Leu Pro Val Pro Ala  
130 135 140  
Phe Asn Val Ile Asn Gly Gly Ser His Ala Gly Asn Lys Leu Ala Met  
145 150 155 160  
Gln Glu Phe Met Ile Leu Pro Val Gly Ala Ala Asn Phe Arg Glu Ala  
165 170 175  
Met Arg Ile Gly Ala Glu Val Tyr His Asn Leu Lys Asn Val Ile Lys  
180 185 190  
Glu Lys Tyr Gly Lys Asp Ala Thr Asn Val Gly Asp Glu Gly Gly Phe  
195 200 205  
Ala Pro Asn Ile Leu Glu Asn Lys Glu Gly Leu Glu Leu Leu Lys Thr  
210 215 220  
Ala Ile Gly Lys Ala Gly Tyr Thr Asp Lys Val Val Ile Gly Met Asp  
225 230 235 240  
Val Ala Ala Ser Glu Phe Phe Arg Ser Gly Lys Tyr Asp Leu Asp Phe  
245 250 255  
Lys Ser Pro Asp Asp Pro Ser Arg Tyr Ile Ser Pro Asp Gln Leu Ala  
260 265 270  
Asp Leu Tyr Lys Ser Phe Ile Lys Asp Tyr Pro Val Val Ser Ile Glu  
275 280 285  
Asp Pro Phe Asp Gln Asp Asp Trp Gly Ala Trp Gln Lys Phe Thr Ala  
290 295 300  
Ser Ala Gly Ile Gln Val Val Gly Asp Asp Leu Thr Val Thr Asn Pro  
305 310 315 320  
Lys Arg Ile Ala Gln Ala Val Asn Glu Lys Ser Cys Asn Cys Leu Leu  
325 330 335  
Leu Lys Val Asn Gln Ile Gly Ser Val Thr Glu Ser Leu Gln Ala Cys  
340 345 350  
Lys Leu Ala Gln Ala Asn Gly Trp Gly Val Met Val Ser His Arg Ser  
355 360 365  
Gly Glu Thr Glu Asp Thr Phe Ile Ala Asp Leu Val Val Gly Leu Cys  
370 375 380  
Thr Gly Gln Ile Lys Thr Gly Ala Pro Cys Arg Ser Glu Arg Leu Ala  
385 390 395 400  
Lys Tyr Asn Gln Leu Leu Arg Ile Glu Glu Leu Gly Ser Lys Ala  
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<211> 337  
<212> DNA  
<213> Homo sapiens

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 337

&lt;210&gt; 3658

&lt;211&gt; 99

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3658

Met	Cys	His	Met	Phe	Ile	Phe	Ser	Ser	Arg	Arg	Thr	Arg	Ala	Gly	Val
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Leu	Arg	Val	His	Phe	Arg	Leu	Lys	Ala	Tyr	Thr	Cys	Arg	Cys	Val	Thr
			20					25					30		
Cys	Ser	Phe	Ser	Ala	Gln	Gly	Val	His	Val	Gln	Val	Cys	Tyr	Val	Phe
		35				40						45			
Ile	Phe	Gly	Ser	Arg	Leu	Thr	Arg	Ala	Gly	Val	Pro	His	Val	His	Phe
	50					55					60				
Arg	Leu	Lys	Ala	Tyr	Met	Cys	Arg	Cys	Val	Thr	Cys	Ser	Leu	Ser	Ala
65					70					75				80	
Gln	Arg	Val	His	Val	Gln	Val	Cys	His	Met	Phe	Ile	Phe	Gly	Ser	Arg
				85					90					95	
Arg	Thr	Arg													

&lt;210&gt; 3659

&lt;211&gt; 1025

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3659

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 180  
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 300  
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<210> 3660  
 <211> 341  
 <212> PRT  
 <213> Homo sapiens

<400> 3660  
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 35 40 45  
 Leu Asn Leu Gln Gln His Leu Ser Ala Leu Glu Lys Asp Ile Lys His  
 50 55 60  
 Asn Glu Glu Leu Leu Lys Arg Cys Gln Leu His Tyr Lys Glu Leu Lys  
 65 70 75 80  
 Met Lys Ile Arg Lys Asn Ile Ser Glu Ile Arg Glu Leu Glu Asn Ile  
 85 90 95  
 Glu Glu His Gln Ser Val Asp Ile Ala Thr Leu Glu Asp Glu Ala Gln  
 100 105 110  
 Glu Asn Lys Ser Lys Met Lys Met Val Glu Glu His Met Glu Gln Gln  
 115 120 125  
 Lys Glu Asn Met Glu His Leu Lys Ser Leu Lys Ile Glu Ala Glu Asn  
 130 135 140  
 Lys Tyr Asp Ala Ile Lys Phe Lys Ile Asn Gln Leu Ser Glu Leu Ala  
 145 150 155 160  
 Asp Pro Leu Lys Asp Glu Leu Asn Leu Ala Asp Ser Glu Val Asp Asn  
 165 170 175  
 Gln Lys Arg Gly Lys Arg His Tyr Glu Lys Lys Gln Lys Glu His Leu  
 180 185 190  
 Asp Thr Leu Asn Lys Lys Lys Arg Glu Leu Asp Met Lys Glu Lys Glu  
 195 200 205  
 Leu Glu Glu Lys Met Ser Gln Ala Arg Gln Ile Cys Pro Glu Arg Ile

210	215	220
Glu Val Glu Lys Ser Ala Ser Ile Leu Asp Lys Glu Ile Asn Arg Leu		
225	230	235
Arg Gln Lys Ile Gln Ala Glu His Ala Ser His Gly Asp Arg Glu Glu		240
	245	250
Ile Met Arg Gln Tyr Gln Glu Ala Arg Glu Thr Tyr Leu Asp Leu Asp		255
	260	265
Ser Lys Val Arg Thr Leu Lys Lys Phe Ile Lys Leu Leu Gly Glu Ile		270
	275	280
Met Glu His Arg Phe Lys Thr Tyr Gln Gln Phe Arg Arg Cys Leu Thr		285
	290	295
Leu Arg Cys Lys Leu Tyr Phe Asp Asn Leu Leu Ser Gln Arg Ala Tyr		300
305	310	315
Cys Gly Lys Met Asn Phe Asp His Lys Asn Glu Thr Leu Ser Ile Ser		320
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Val Gln Pro Gly Glu		335
	340	

<210> 3661  
 <211> 1117  
 <212> DNA  
 <213> Homo sapiens

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 1117

<210> 3662

<211> 371

<212> PRT

<213> Homo sapiens

<400> 3662

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Asp	His	Arg	Leu	Ser	Ile	Ser	Lys	Lys	Thr	Ala	Asn	Gly	Gly	Leu	Lys
			20					25					30		
Pro	Ser	Val	Tyr	Pro	Tyr	Lys	Leu	Tyr	Arg	Leu	Leu	Pro	Met	Lys	Cys
		35					40					45			
Lys	Arg	Ala	Pro	Tyr	Lys	Ser	Tyr	Arg	Asn	Ser	Ser	Tyr	Glu	Asn	Ala
	50					55					60				
Arg	Glu	Asn	Ser	Gln	Met	Asn	Glu	Ser	Ala	Pro	Gly	Thr	Tyr	Val	Val
65					70				75					80	
Gln	Asn	Pro	His	Ser	Ser	Glu	Leu	Pro	Thr	Leu	Asn	Phe	Gln	Asp	Thr
			85						90					95	
Val	Asn	Thr	Leu	Thr	Asn	Ser	Pro	Ala	Ile	Pro	Leu	Glu	Thr	Ser	Ala
			100					105					110		
Cys	Gln	Asp	Ile	Pro	Thr	Ser	Ala	Asn	Val	Gln	Asn	Ala	Glu	Gly	Thr
	115						120					125			
Lys	Trp	Gly	Glu	Glu	Ala	Leu	Lys	Met	Asp	Leu	Asp	Asn	Asn	Phe	Tyr
	130					135					140				
Ser	Thr	Glu	Val	Ser	Val	Ser	Ser	Thr	Glu	Asn	Ala	Val	Ser	Ser	Asp
145					150				155					160	
Leu	Arg	Ala	Gly	Asp	Val	Pro	Val	Leu	Ser	Leu	Ser	Asn	Ser	Ser	Glu
			165						170					175	
Asn	Ala	Ala	Ser	Val	Ile	Ser	Tyr	Ser	Gly	Ser	Ala	Pro	Ser	Val	Ile
		180						185					190		
Val	His	Ser	Ser	Gln	Phe	Ser	Ser	Val	Ile	Met	His	Ser	Asn	Ala	Ile
	195						200						205		
Ala	Ala	Met	Thr	Ser	Ser	Asn	His	Arg	Ala	Phe	Ser	Asp	Pro	Ala	Val
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Ser	Gln	Ser	Leu	Lys	Asp	Asp	Ser	Lys	Pro	Glu	Pro	Asp	Lys	Val	Gly
225					230					235				240	
Arg	Phe	Ala	Ser	Arg	Pro	Lys	Ser	Ile	Lys	Glu	Lys	Lys	Lys	Thr	Thr
			245						250					255	
Ser	His	Thr	Arg	Gly	Glu	Ile	Pro	Glu	Glu	Ser	Asn	Tyr	Val	Ala	Asp
		260						265					270		
Pro	Gly	Gly	Ser	Leu	Ser	Lys	Thr	Thr	Asn	Ile	Ala	Glu	Glu	Thr	Ser
	275						280					285			
Lys	Ile	Glu	Thr	Tyr	Ile	Ala	Lys	Pro	Ala	Leu	Pro	Gly	Thr	Ser	Thr
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 20          25          30
Met Ser Asp Asn Val Asp Arg Cys Phe Glu Thr Cys Pro Pro Arg Thr
 35          40          45
Phe Leu Pro Ala Leu Tyr Lys Ile Phe Leu Asp Glu Ser Ala Pro Asp
 50          55          60
Asn Val Leu Glu Val Thr Ala Arg Ala Ile Thr Tyr Tyr Leu Asp Val
65          70          75          80
Ser Ala Glu Cys Thr Arg Arg Ile Val Gly Val Asp Gly Ala Ile Lys
 85          90          95
Ala Leu Cys Asn Arg Leu Val Val Val Glu Leu Asn Asn Arg Thr Ser

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 <213> Homo sapiens

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&lt;213&gt; Homo sapiens

&lt;400&gt; 3666

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Gln	Leu	His	Tyr	Val	His	Arg	Asp	Ile	Lys	Pro	Asp	Asn	Val	Leu	Leu
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Asp	Val	Asn	Gly	His	Ile	Arg	Leu	Ala	Asp	Phe	Gly	Ser	Cys	Leu	Lys
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Met	Asn	Asp	Asp	Gly	Thr	Val	Gln	Ser	Ser	Val	Ala	Val	Gly	Thr	Pro

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2821

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Val Val Cys Asp Cys Lys Leu Phe Leu Tyr Asp Leu Pro Glu Gly Lys		1135
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Ser Thr Gln Pro Gly Val Ile Ala Ser Gln Val Leu Asp Leu Arg Asp		1150
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Asp Glu Phe Ser Val Ser Ser Val Leu Ala Ser Asp Val Ile His Ala		1165
	1170	1175
Thr Arg Arg Asp Ile Pro Cys Ile Phe Arg Val Thr Ala Ser Leu Leu		1180
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Gly Ala Pro Ser Lys Thr Ser Ser Leu Leu Ile Leu Thr Glu Asn Glu		1200
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Asn Glu Lys Arg Lys Trp Val Gly Ile Leu Glu Gly Leu Gln Ser Ile		1215
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Ala Tyr Asp Ser Ser Leu Pro Leu Ile Lys Ala Ile Leu Thr Ala Ala		1245
	1250	1255
Ile Val Asp Ala Asp Arg Ile Ala Val Gly Leu Glu Glu Gly Leu Tyr		1260
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Val Ile Glu Val Thr Arg Asp Val Ile Val Arg Ala Ala Asp Cys Lys		1280
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Lys Val His Gln Ile Glu Leu Ala Pro Arg Glu Lys Ile Val Ile Leu		1295
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Cys Gln Leu Met Ala Thr Ala Thr Leu Lys Arg Asn Ser Gly Thr Cys		1340
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Val Gln Cys Leu Ala Val Leu Arg Asp Arg Leu Cys Val Gly Tyr Pro		1390
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&lt;213&gt; Homo sapiens

&lt;400&gt; 3667

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120

tgattgtatt tactctttct tccctactca tagtatgcgt tccattttga ggaatcacag  
180

atategaaga gatgccagaa cactagaaga tgaagaagag atgtggttta acacagatga  
240

agatgacatg gaagatggag aagctgtagt gtctccatct gacaaaacta aaaatgatga  
300

tgatattatg gatccaataa gtaaattcat ggaaaggaag aaattaaaag aaagtgagga  
360

aaaggaagtg cttctgaaaa caaacctttc tggacggcag agcccaagtt tcaagctttc  
420

cctgtccagt ggaacgaaga ctaacctcac cagccagtca tctacaacaa atctgcctgg  
480

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505

&lt;210&gt; 3668

&lt;211&gt; 117

&lt;212&gt; PRT



<213> Homo sapiens

<400> 3668

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Met Arg Ser Ile Leu Arg Asn His Arg Tyr Arg Arg Asp Ala Arg Thr
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Leu Glu Asp Glu Glu Glu Met Trp Phe Asn Thr Asp Glu Asp Asp Met
           20           25           30
Glu Asp Gly Glu Ala Val Val Ser Pro Ser Asp Lys Thr Lys Asn Asp
           35           40           45
Asp Asp Ile Met Asp Pro Ile Ser Lys Phe Met Glu Arg Lys Lys Leu
           50           55           60
Lys Glu Ser Glu Glu Lys Glu Val Leu Leu Lys Thr Asn Leu Ser Gly
65           70           75           80
Arg Gln Ser Pro Ser Phe Lys Leu Ser Leu Ser Ser Gly Thr Lys Thr
           85           90           95
Asn Leu Thr Ser Gln Ser Ser Thr Thr Asn Leu Pro Gly Ser Pro Gly
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Ser Pro Gly Ser Pro
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<210> 3669

<211> 1226

<212> DNA

<213> Homo sapiens

<400> 3669

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ggattaatct tttacattaa tcattcactt tatgaaaacc tggatgaaga attaaatgaa
180
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240
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360
ctgaaaatgg gagatcttga cgtgtacaga aatgaaatga aaagccatcc agagatgaag
420
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480
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540
gtcctgggat tgcagaagaa cagcaaaatt gggattgaag aagcagattc tttctttaag
600
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660
cagctagtgg catgtctccc agatgtggta cttcaggaac tctttttcaa actcacatca
720
cagtacatct ggagattgtc taagaggcag cctcctgaca ccacaccatt gcgaacatcg
780
gaggatctga taaatgcctg tagtcattat ggcttaattt atccatgggt tcacgtcgta
840

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 960  
 gaagacacta ttgccggcct cagtgtccat gttctgtgtc gtacacgctt gaaagagtat  
 1020  
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 1080  
 catgaactga aagaagagaa ccggactctg tgggtggaaaa aactgttgcc tgaactttgt  
 1140  
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<210> 3670  
 <211> 385  
 <212> PRT  
 <213> Homo sapiens

<400> 3670  
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 Asn His Ser Leu Tyr Glu Asn Leu Asp Glu Glu Leu Asn Glu Glu Leu  
 35 40 45  
 Ala Ala Lys Val Val Gln Met Phe Tyr Val Ala Glu Pro Lys Gln Val  
 50 55 60  
 Pro His Ile Leu Cys Ser Pro Ser Met Lys Asn Ile Asn Pro Leu Thr  
 65 70 75 80  
 Ala Met Ser Tyr Leu Arg Lys Met Asp Thr Ser Gly Phe Ser Ser Ile  
 85 90 95  
 Leu Val Thr Leu Ser Lys Ala Ala Val Ala Leu Lys Met Gly Asp Leu  
 100 105 110  
 Asp Val Tyr Arg Asn Glu Met Lys Ser His Pro Glu Met Lys Leu Val  
 115 120 125  
 Cys Gly Phe Ile Leu Glu Pro Arg Leu Leu Ile Gln His Arg Lys Gly  
 130 135 140  
 Gln Ile Val Pro Thr Glu Leu Ala Thr His Leu Lys Glu Thr Gln Pro  
 145 150 155 160  
 Gly Leu Leu Val Ala Ser Val Leu Gly Leu Gln Lys Asn Ser Lys Ile  
 165 170 175  
 Gly Ile Glu Glu Ala Asp Ser Phe Phe Lys Val Leu Cys Gly Lys Asp  
 180 185 190  
 Glu Asp Thr Ile Pro Gln Leu Leu Ile Asp Phe Trp Glu Ala Gln Leu  
 195 200 205  
 Val Ala Cys Leu Pro Asp Val Val Leu Gln Glu Leu Phe Phe Lys Leu  
 210 215 220  
 Thr Ser Gln Tyr Ile Trp Arg Leu Ser Lys Arg Gln Pro Pro Asp Thr  
 225 230 235 240  
 Thr Pro Leu Arg Thr Ser Glu Asp Leu Ile Asn Ala Cys Ser His Tyr  
 245 250 255  
 Gly Leu Ile Tyr Pro Trp Val His Val Val Ile Ser Ser Asp Ser Leu

260 265 270  
 Ala Asp Lys Asn Tyr Thr Glu Asp Leu Ser Lys Leu Gln Ser Leu Ile  
 275 280 285  
 Cys Gly Pro Ser Phe Asp Ile Ala Ser Ile Ile Pro Phe Leu Glu Pro  
 290 295 300  
 Leu Ser Glu Asp Thr Ile Ala Gly Leu Ser Val His Val Leu Cys Arg  
 305 310 315 320  
 Thr Arg Leu Lys Glu Tyr Glu Gln Cys Ile Asp Ile Leu Leu Glu Arg  
 325 330 335  
 Cys Pro Glu Ala Val Ile Pro Tyr Ala Asn His Glu Leu Lys Glu Glu  
 340 345 350  
 Asn Arg Thr Leu Trp Trp Lys Lys Leu Leu Pro Glu Leu Cys Gln Arg  
 355 360 365  
 Ile Lys Cys Gly Gly Glu Lys Tyr Gln Leu Tyr Leu Ser Ser Leu Lys  
 370 375 380  
 Ala  
 385

&lt;210&gt; 3671

&lt;211&gt; 828

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3671

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 ccaatgaaat tatgtatctt tatttaatga aaatgcctgc tgcgtaccaa ggtatgtact  
 120  
 agggcatctg gggtaagtaa aaacaaacac atagagcctg cctggagaag ctcatggtct  
 180  
 gatggaaaga taagcaagaa gagttaattt ctaatcaata tgataaaaag gtcagagagc  
 240  
 agtttctgaa aaacatgttt ttgagttgag tcctgaaaga caaggagatg ttagtaaagc  
 300  
 agagaaggga gaattcattc tagaaagatc agacaatgtg tgggaagggc agagtctgaa  
 360  
 aagagcatgc cccatttgga gaagcatcaa gaagcccacg cgttagaagc accggcccca  
 420  
 tgagacaaag acacagctag agagattgac taggcatgt cggaatgtcc tcttatttta  
 480  
 tacatacata agcatataga tacatatagc caaagttacc tttttaatga tcttttttac  
 540  
 ccagtgtatt ctggaggctg aatggtcaca tatgaacatc tccgagaggt tgtgtttggc  
 600  
 aaaagtgaag atgagcatta tcccctttgg aaatcagtea ttggagggat gatggctggt  
 660  
 gttattggcc agtttttagc caatccaact gacctagtga aggttcagat gcaaattggaa  
 720  
 ggaaaaagga aactggaagg aaaaccattg cgatttcgtg gtgtacatca tgcatttgca  
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 828

&lt;210&gt; 3672

<211> 124  
 <212> PRT  
 <213> Homo sapiens

<400> 3672

Met	Ser	Glu	Cys	Pro	Leu	Ile	Leu	Tyr	Ile	His	Lys	His	Ile	Asp	Thr
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Tyr	Ser	Gln	Ser	Tyr	Leu	Phe	Asn	Asp	Leu	Phe	Tyr	Pro	Val	Tyr	Ser
		20					25					30			
Gly	Gly	Arg	Met	Val	Thr	Tyr	Glu	His	Leu	Arg	Glu	Val	Val	Phe	Gly
		35					40					45			
Lys	Ser	Glu	Asp	Glu	His	Tyr	Pro	Leu	Trp	Lys	Ser	Val	Ile	Gly	Gly
	50				55					60					
Met	Met	Ala	Gly	Val	Ile	Gly	Gln	Phe	Leu	Ala	Asn	Pro	Thr	Asp	Leu
65				70				75					80		
Val	Lys	Val	Gln	Met	Gln	Met	Glu	Gly	Lys	Arg	Lys	Leu	Glu	Gly	Lys
			85					90					95		
Pro	Leu	Arg	Phe	Arg	Gly	Val	His	His	Ala	Phe	Ala	Lys	Ile	Leu	Ala
		100					105						110		
Glu	Gly	Gly	Ile	Arg	Gly	Leu	Trp	Ala	Gly	Trp	Val				
		115					120								

<210> 3673  
 <211> 1052  
 <212> DNA  
 <213> Homo sapiens

<400> 3673

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 120  
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 180  
 aaaacacatg gtggatcttc aggaagcaga ggatattatt ctagtgcttt cgcaagttcc  
 240  
 acaaatgcat atatgctgat ctatagactg aaggatccag ccagaaatgc aaaatttcta  
 300  
 gaagtggatg aatacccaga acatattaaa aacttggtgc agaaagagag agagttggaa  
 360  
 gaacaagaaa agagacaacg agaaattgag cgcaatacat gcaagataaa attattctgt  
 420  
 ttgcatccta caaaacaagt aatgatggaa aataaattgg aggttcataa ggataagaca  
 480  
 ttaaaggaag cagtagaaat ggcttataag atgatggatt tagaagaggt aatacccctg  
 540  
 gattgctgtc gccttggtta atatgatgag tttcatgatt atctagaacg gtcatatgaa  
 600  
 ggagaagaag atacaccaat ggggcttcta ctaggtggcg tcaagtcaac atatatgttt  
 660  
 gatctgctgt tggagacgag aaagcctgat caggttttcc aatcttataa acctggaggg  
 720  
 gagccatttt acaccatttt tagttggctc gtacttagaa ttttcctgag aaagggtttt  
 780

tttttattgt agcaatgaac ataatttaca ttttgtatat ggtcttaciaa tgtagaataa  
 840  
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 900  
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 960  
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 1020  
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 1052

<210> 3674

<211> 263

<212> PRT

<213> Homo sapiens

<400> 3674

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Phe	Ser	Val	Met	Val	His	Ser	Gly	Ser	Ala	Ala	Gly	Gly	His	Tyr	Tyr
			20					25					30		
Ala	Cys	Ile	Lys	Ser	Phe	Ser	Asp	Glu	Gln	Trp	Tyr	Ser	Phe	Asn	Asp
			35				40					45			
Gln	His	Val	Ser	Arg	Ile	Thr	Gln	Glu	Asp	Ile	Lys	Lys	Thr	His	Gly
	50					55					60				
Gly	Ser	Ser	Gly	Ser	Arg	Gly	Tyr	Tyr	Ser	Ser	Ala	Phe	Ala	Ser	Ser
65					70				75					80	
Thr	Asn	Ala	Tyr	Met	Leu	Ile	Tyr	Arg	Leu	Lys	Asp	Pro	Ala	Arg	Asn
				85				90						95	
Ala	Lys	Phe	Leu	Glu	Val	Asp	Glu	Tyr	Pro	Glu	His	Ile	Lys	Asn	Leu
			100					105					110		
Val	Gln	Lys	Glu	Arg	Glu	Leu	Glu	Gln	Glu	Lys	Arg	Gln	Arg	Glu	
		115					120				125				
Ile	Glu	Arg	Asn	Thr	Cys	Lys	Ile	Lys	Leu	Phe	Cys	Leu	His	Pro	Thr
	130					135					140				
Lys	Gln	Val	Met	Met	Glu	Asn	Lys	Leu	Glu	Val	His	Lys	Asp	Lys	Thr
145					150				155					160	
Leu	Lys	Glu	Ala	Val	Glu	Met	Ala	Tyr	Lys	Met	Met	Asp	Leu	Glu	Glu
			165					170					175		
Val	Ile	Pro	Leu	Asp	Cys	Cys	Arg	Leu	Val	Lys	Tyr	Asp	Glu	Phe	His
			180					185					190		
Asp	Tyr	Leu	Glu	Arg	Ser	Tyr	Glu	Gly	Glu	Glu	Asp	Thr	Pro	Met	Gly
	195					200					205				
Leu	Leu	Leu	Gly	Gly	Val	Lys	Ser	Thr	Tyr	Met	Phe	Asp	Leu	Leu	Leu
	210					215					220				
Glu	Thr	Arg	Lys	Pro	Asp	Gln	Val	Phe	Gln	Ser	Tyr	Lys	Pro	Gly	Gly
225					230				235					240	
Glu	Pro	Phe	Tyr	Thr	Ile	Phe	Ser	Trp	Ser	Val	Leu	Arg	Ile	Phe	Leu
			245					250					255		
Arg	Lys	Val	Phe	Phe	Leu	Leu									
			260												

<210> 3675

<211> 837

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3675

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120
gacagctata ttgtgcgtgt caaggctgtg gttatgacca gagatgactc cagcggggga
180
tggttccac aggaaggagg cgggatcagt cgcgtcgggg tctgtaaggt catgcacccc
240
gaaggcaatg gacgaagcgg ctttctcatc catggtgaac gacagaaaga caaactggtg
300
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360
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420
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540
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660
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720
aaaaattctc cactgcagca catccaggta tcaaatacaga gggttaaaga agccatagac
780
agggccctgt gaagaaagaa atatcaagca aggcattgta ataccaaatt cagatct
837

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&lt;210&gt; 3676

&lt;211&gt; 154

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3676

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Met Thr Glu Glu Thr His Pro Asp Asp Asp Ser Tyr Ile Val Arg Val
1      5      10      15
Lys Ala Val Val Met Thr Arg Asp Asp Ser Ser Gly Gly Trp Phe Pro
20      25      30
Gln Glu Gly Gly Gly Ile Ser Arg Val Gly Val Cys Lys Val Met His
35      40      45
Pro Glu Gly Asn Gly Arg Ser Gly Phe Leu Ile His Gly Glu Arg Gln
50      55      60
Lys Asp Lys Leu Val Val Leu Glu Cys Tyr Val Arg Lys Asp Leu Val
65      70      75      80
Tyr Thr Lys Ala Asn Pro Thr Phe His His Trp Lys Val Asp Asn Arg
85      90      95
Lys Phe Gly Leu Thr Phe Gln Ser Pro Ala Asp Ala Arg Ala Phe Asp
100     105     110
Arg Gly Val Arg Lys Ala Ile Glu Asp Leu Ile Glu Glu Val Glu Asn

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	115		120		125
Asp	Ser Gly Gly Pro Arg Arg	Leu Leu Ala Tyr	Pro Leu Ser Ser Cys		
	130		135		140
Asn Gln Arg Pro Arg Val Tyr Ser Cys His					
145		150			

<210> 3677  
 <211> 418  
 <212> DNA  
 <213> Homo sapiens

<400> 3677  
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 120  
 tgccgaaaga gcatggagga agatgaaagg cagacaggtc gagaacatgc agtggcgatc  
 180  
 tccttgtcac acacatcctg caaatcacag tcttgtggag atgactctca ttcgtcctcg  
 240  
 tcttctcct catcatcctc atcctcgtcc tcttcttct gccctgggaa ctcgggagac  
 300  
 tgggatacta gctcgttctc gtcggcacat aagctctcgg gcctctggaa ttccccacat  
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 418

<210> 3678  
 <211> 139  
 <212> PRT  
 <213> Homo sapiens

<400> 3678  
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 Leu Pro Pro Asp Phe Met Pro Lys Leu Val Lys Asn Leu Leu Gly Glu  
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 Met Pro Leu Trp Val Cys Gln Ser Cys Arg Lys Ser Met Glu Glu Asp  
 35 40 45  
 Glu Arg Gln Thr Gly Arg Glu His Ala Val Ala Ile Ser Leu Ser His  
 50 55 60  
 Thr Ser Cys Lys Ser Gln Ser Cys Gly Asp Asp Ser His Ser Ser Ser  
 65 70 75 80  
 Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Cys Pro Gly  
 85 90 95  
 Asn Ser Gly Asp Trp Asp Pro Ser Ser Phe Leu Ser Ala His Lys Leu  
 100 105 110  
 Ser Gly Leu Trp Asn Ser Pro His Ser Ser Gly Ala Met Pro Gly Ser  
 115 120 125  
 Ser Leu Gly Ser Pro Pro Thr Ile Pro Gly Ala  
 130 135

<210> 3679  
 <211> 567



<212> DNA  
 <213> Homo sapiens

<400> 3679  
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 120  
 gagatcgag agatcaaggc ccagctggag acagccctga agtggaggaa ctatgaggtg  
 180  
 aagctgcggc tgctgctgca cctggaggaa ctgcagatgg agcatgatat ccggcactat  
 240  
 gacctggagt cgggtgcccat gacctgggac cctgtggacc agaaccccag gctgctcacg  
 300  
 ctggaggttc ctggagtgac tgagagccgc ccctcagtgc tacggggcga ccacctgttt  
 360  
 gcccttttgt cctcggagac acaccaggag gaccccatca catataaggg ctttgtgcac  
 420  
 aaggtggaat tggaccgtgt caagctgagc ttttccatga gcctcctgag ccgctttgtg  
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<210> 3680  
 <211> 189  
 <212> PRT  
 <213> Homo sapiens

<400> 3680  
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 Thr Ser Ile Phe Thr Ala Pro Lys Glu Ile Ala Glu Ile Lys Ala Gln  
 35 40 45  
 Leu Glu Thr Ala Leu Lys Trp Arg Asn Tyr Glu Val Lys Leu Arg Leu  
 50 55 60  
 Leu Leu His Leu Glu Glu Leu Gln Met Glu His Asp Ile Arg His Tyr  
 65 70 75 80  
 Asp Leu Glu Ser Val Pro Met Thr Trp Asp Pro Val Asp Gln Asn Pro  
 85 90 95  
 Arg Leu Leu Thr Leu Glu Val Pro Gly Val Thr Glu Ser Arg Pro Ser  
 100 105 110  
 Val Leu Arg Gly Asp His Leu Phe Ala Leu Leu Ser Ser Glu Thr His  
 115 120 125  
 Gln Glu Asp Pro Ile Thr Tyr Lys Gly Phe Val His Lys Val Glu Leu  
 130 135 140  
 Asp Arg Val Lys Leu Ser Phe Ser Met Ser Leu Leu Ser Arg Phe Val  
 145 150 155 160  
 Asp Gly Leu Thr Phe Lys Val Asn Phe Thr Phe Asn Arg Gln Pro Leu  
 165 170 175  
 Arg Val Gln His Arg Ala Trp Glu Leu Thr Gly Arg Trp

180

185

<210> 3681  
<211> 788  
<212> DNA  
<213> Homo sapiens

<400> 3681  
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120  
gagaccggga ggcagagctt cagcagctgc gggacagcct ggggctgagc atggagcagc  
180  
gcgggcggagg tcgcctgcga ggccgctggc caggcctgag cctctgccac catggccatt  
240  
gtgcagactc tgccagtgcc actggagcct gctcctgaag ctgccactgc cccacaagct  
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ccagtcattg gtagtgtgag cagccttatt tcaggccggc cctgtcccgg ggggccagct  
360  
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600  
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660  
cgcccaacag ccttcaagcc agtgctgccc aaacctcgag gggctccgtc cctgcctagc  
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780  
gggggccc  
788

<210> 3682  
<211> 185  
<212> PRT  
<213> Homo sapiens

<400> 3682  
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20 25 30  
Ile Ser Gly Arg Pro Cys Pro Gly Gly Pro Ala Pro Pro Arg His His  
35 40 45  
Gly Pro Pro Gly Pro Thr Phe Phe Arg Gln Gln Asp Gly Leu Leu Arg  
50 55 60  
Gly Gly Tyr Glu Ala Gln Glu Pro Leu Cys Pro Ala Val Pro Pro Arg  
65 70 75 80  
Lys Ala Val Pro Val Thr Ser Phe Thr Tyr Ile Asn Glu Asp Phe Arg

85 90 95  
Thr Glu Ser Pro Pro Ser Pro Ser Ser Asp Val Glu Asp Ala Arg Glu  
100 105 110  
Gln Arg Ala His Asn Ala His Leu Arg Gly Pro Pro Pro Lys Leu Ile  
115 120 125  
Pro Val Ser Gly Lys Leu Glu Lys Asn Ile Glu Lys Ile Leu Ile Arg  
130 135 140  
Pro Thr Ala Phe Lys Pro Val Leu Pro Lys Pro Arg Gly Ala Pro Ser  
145 150 155 160  
Leu Pro Ser Phe Met Gly Pro Arg Ala Thr Gly Leu Ser Gly Ser Gln  
165 170 175  
Gly Ser Leu Thr Gln Leu Phe Gly Gly  
180 185

<210> 3683  
<211> 4421  
<212> DNA  
<213> Homo sapiens

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 Glu Lys Pro Pro Arg Pro Pro Arg Pro Leu His Leu Ser Asp Arg Ser  
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&lt;210&gt; 3685

&lt;211&gt; 1293

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3685

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<213> Homo sapiens

<400> 3686

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<212> DNA

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Trp Met Cys His Arg Cys Thr Val Arg Arg Lys Lys Arg Glu Gln Lys  
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130 135 140  
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145 150 155 160  
Ala Ser Arg Pro Gly Thr Pro Thr Ser Ser Ala Ser Thr Glu Thr Pro  
165 170 175  
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&lt;210&gt; 3691

&lt;211&gt; 418

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3691

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<210> 3692  
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 <213> Homo sapiens

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 <213> Homo sapiens

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 Ser Gln Ile Met Ala Arg Lys Lys Arg Arg Gly Ile Ile Glu Lys Arg  
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340	345	350
Ala Thr Ala Ile Ser Pro	Pro Leu Ser Val Ser	Ala Thr Ser Ser Pro
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&lt;210&gt; 3695

&lt;211&gt; 1615

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3695

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&lt;210&gt; 3696

&lt;211&gt; 146

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3696

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Cys	Asn	Ser	Trp	Ser	Ser	Pro	Gln	Leu	Gln	Ser	Ser	Leu	Pro	Glu	Pro
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Phe	Tyr	Gln	Ala	Leu	Asn	Leu	Ser	Leu	Pro	Leu	Pro	Asn	Phe	His	Ala
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Leu	Gly	Leu	Ser	Phe	Ala	Glu	Leu	Arg	Arg	Met	Tyr	Leu	Phe	Leu	Asn
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Ser	Ser	Gly	Leu	Leu	Val	Leu	Pro	Gln	Ala	Gly	Leu	Leu	Thr	Pro	His
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&lt;210&gt; 3697

&lt;211&gt; 550

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3697

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&lt;210&gt; 3698

&lt;211&gt; 183

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3698

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Ala	Arg	Gln	Ser	Trp	Gly	Gln	Cys	Gln	Pro	Val	Cys	Gln	Pro	Arg	Cys	35	40	45	
Lys	His	Gly	Glu	Cys	Ile	Gly	Pro	Asn	Lys	Cys	Lys	Cys	His	Pro	Gly	50	55	60	
Tyr	Ala	Gly	Lys	Thr	Cys	Asn	Gln	Asp	Leu	Asn	Glu	Cys	Gly	Leu	Lys	65	70	75	80
Pro	Arg	Pro	Cys	Lys	His	Arg	Cys	Met	Asn	Thr	Tyr	Gly	Ser	Tyr	Lys	85	90	95	
Cys	Tyr	Cys	Leu	Asn	Gly	Tyr	Met	Leu	Met	Pro	Asp	Gly	Ser	Cys	Ser	100	105	110	
Ser	Ala	Leu	Thr	Cys	Ser	Met	Ala	Asn	Cys	Gln	Tyr	Gly	Cys	Asp	Val	115	120	125	
Val	Lys	Gly	Gln	Ile	Arg	Cys	Gln	Cys	Pro	Ser	Pro	Gly	Leu	Gln	Leu	130	135	140	
Ala	Pro	Asp	Gly	Arg	Thr	Cys	Val	Asp	Val	Asp	Glu	Cys	Ala	Thr	Gly	145	150	155	160
Arg	Ala	Ser	Cys	Pro	Lys	Phe	Arg	Gln	Cys	Val	Asn	Thr	Phe	Gly	Ser	165	170	175	
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 65 70 75 80  
 Gly His Cys Leu Phe Tyr Tyr Lys Asp Ser Arg Glu Glu Ser Val Leu  
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<400> 3701

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His	Thr	Gln	Pro	His	Ala	Tyr	Ser	Tyr	Ser	Asp	Phe								
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&lt;210&gt; 3703

&lt;211&gt; 3294

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3703

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<211> 619

<212> PRT

<213> Homo sapiens

<400> 3704

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&lt;210&gt; 3705

&lt;211&gt; 1737

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3705

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<400> 3706  
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<400> 3708  
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<210> 3710  
<211> 70  
<212> PRT  
<213> Homo sapiens

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<213> Homo sapiens

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<211> 368  
<212> PRT  
<213> Homo sapiens

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Leu Gly Arg Gly Phe Asn Thr Gly Val Ile Leu Leu Arg Leu Asp Arg  
35 40 45  
Leu Arg Gln Ala Gly Trp Glu Gln Met Trp Arg Leu Thr Ala Arg Arg  
50 55 60  
Glu Leu Leu Ser Leu Pro Ala Ala Ser Leu Ala Asp Gln Asp Ile Phe  
65 70 75 80  
Asn Ala Val Ile Lys Glu His Pro Gly Leu Val Gln Arg Leu Pro Cys  
85 90 95  
Val Trp Asn Val Gln Leu Ser Asp His Thr Leu Ala Glu Arg Cys Tyr  
100 105 110  
Ser Glu Ala Ser Asp Leu Lys Val Ile His Trp Asn Ser Pro Lys Lys  
115 120 125  
Leu Arg Val Lys Asn Lys His Val Glu Phe Phe Arg Asn Phe Tyr Leu  
130 135 140  
Thr Phe Leu Glu Tyr Asp Gly Asn Leu Leu Arg Arg Glu Leu Phe Val  
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165 170 175  
Ala Gln Leu Asp Glu Glu Asp Pro Cys Phe Glu Phe Arg Gln Gln Gln  
180 185 190  
Leu Thr Val His Arg Val His Val Thr Phe Leu Pro His Glu Pro Pro  
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Pro Pro Arg Pro His Asp Val Thr Leu Val Ala Gln Leu Ser Met Asp  
210 215 220  
Arg Leu Gln Met Leu Glu Ala Leu Cys Arg His Trp Pro Gly Pro Met

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Phe Val Glu Ala Ser Pro Val Leu Ala Ala Arg Gln Asp Val Ala Tyr
          260          265          270
His Val Val Tyr Arg Glu Gly Pro Leu Tyr Pro Val Asn Gln Leu Arg
          275          280          285
Asn Val Ala Leu Ala Gln Ala Leu Thr Pro Tyr Val Phe Leu Ser Asp
          290          295          300
Ile Asp Phe Leu Pro Ala Tyr Ser Leu Tyr Asp Tyr Leu Arg Ala Ser
305          310          315          320
Ile Glu Gln Leu Gly Leu Gly Ser Arg Arg Lys Ala Ala Leu Val Val
          325          330          335
Pro Ala Phe Glu Thr Leu Arg Tyr Arg Phe Ser Phe Pro His Ser Lys
          340          345          350
Val Glu Leu Leu Ala Leu Leu Asp Ala Gly Thr Leu Tyr Thr Phe Arg
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&lt;210&gt; 3713

&lt;211&gt; 1719

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3713

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&lt;210&gt; 3714

&lt;211&gt; 488

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3714

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			20					25					30		
Val	Asn	Glu	Gln	His	Ser	Gly	Ser	Asp	Thr	Gly	Ser	Val	Glu	Arg	His
		35					40					45			
Ser	Glu	Asn	Glu	Thr	Ser	Asp	Arg	Glu	Asp	Gly	Pro	Pro	Lys	Gly	His
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His	Val	Thr	Asp	Ser	Glu	Asn	Asp	Glu	Pro	Leu	Asn	Leu	Asn	Ala	Ser
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Asp	Ser	Glu	Ser	Glu	Glu	Leu	His	Arg	Gln	Lys	Asp	Ser	Asp	Ser	Glu
			85						90					95	
Ser	Glu	Glu	Arg	Ala	Glu	Pro	Pro	Ala	Ser	Asp	Ser	Glu	Asn	Glu	Asp
			100					105					110		
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Pro	Gly	Ser	Asp	Ser	Glu	Asn	Glu	Glu	Leu	Leu	Asn	Gly	His	Ala	Ser
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Ile	Glu	Glu	Leu	Gln	Lys	Ser	Pro	Ala	Ser	Asp	Ser	Glu	Thr	Glu	Asp
		165		170		175									
Ala	Leu	Lys	Pro	Gln	Ile	Ser	Asp	Ser	Glu	Ser	Glu	Glu	Pro	Pro	Arg
		180		185		190									
His	Gln	Ala	Ser	Asp	Ser	Glu	Asn	Glu	Glu	Pro	Pro	Lys	Pro	Arg	Met
		195		200		205									
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		210		215		220									
Glu	Ser	Glu	Glu	Pro	Pro	Arg	His	Gln	Ala	Ser	Asp	Ser	Glu	Asn	Glu
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		245		250		255									
Arg	His	Gln	Ala	Ser	Asp	Ser	Glu	Asn	Glu	Glu	Leu	Pro	Lys	Pro	Arg
		260		265		270									
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		275		280		285									
Ser	Glu	Asn	Glu	Glu	Leu	Pro	Lys	Pro	Arg	Val	Ser	Asp	Ser	Glu	Ser
		290		295		300									
Glu	Gly	Pro	Gln	Lys	Gly	Pro	Ala	Ser	Asp	Ser	Glu	Thr	Glu	Asp	Ala
305		310		315		320									
Ser	Arg	His	Lys	Gln	Lys	Pro	Glu	Ser	Asp	Asp	Asp	Ser	Asp	Arg	Glu
		325		330		335									
Asn	Lys	Gly	Glu	Asp	Thr	Glu	Met	Gln	Asn	Asp	Ser	Phe	His	Ser	Asp
		340		345		350									
Ser	His	Met	Asp	Arg	Lys	Lys	Phe	His	Ser	Ser	Asp	Ser	Glu	Glu	Glu
		355		360		365									
Glu	His	Lys	Lys	Gln	Lys	Met	Asp	Ser	Asp	Glu	Asp	Glu	Lys	Glu	Gly
		370		375		380									
Glu	Glu	Glu	Lys	Val	Ala	Lys	Arg	Lys	Ala	Ala	Val	Leu	Ser	Asp	Ser
385		390		395		400									
Glu	Asp	Glu	Glu	Lys	Ala	Ser	Ala	Lys	Lys	Ser	Arg	Val	Val	Ser	Asp
		405		410		415									
Ala	Asp	Asp	Ser	Asp	Ser	Asp	Ala	Val	Ser	Asp	Lys	Ser	Gly	Lys	Arg
		420		425		430									
Glu	Lys	Thr	Ile	Ala	Ser	Asp	Ser	Glu	Glu	Glu	Ala	Gly	Lys	Glu	Leu
		435		440		445									
Ser	Asp	Lys	Lys	Asn	Glu	Glu	Lys	Asp	Leu	Phe	Gly	Ser	Asp	Ser	Glu
		450		455		460									
Ser	Gly	Asn	Glu	Glu	Glu	Asn	Leu	Ile	Ala	Asp	Ile	Phe	Gly	Glu	Ser
465		470		475		480									
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&lt;210&gt; 3715

&lt;211&gt; 288

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3715

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cacttggaga aacatcgaaa ggacaaagcc cacaaacgct atctgcta at gagcattgac  
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<210> 3716  
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<212> PRT  
<213> Homo sapiens

<400> 3716  
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20 25 30  
Gly Lys Ile Arg Ser Tyr Glu Glu His Leu Glu Lys His Arg Lys Asp  
35 40 45  
Lys Ala His Lys Arg Tyr Leu Leu Met Ser Ile Asp Gln Arg Lys Lys  
50 55 60  
Met Leu Lys Asn Leu Arg Asn Thr Asn Tyr Asp Val Phe Glu Lys Ile  
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<210> 3717  
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<212> DNA  
<213> Homo sapiens

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&lt;210&gt; 3718

&lt;211&gt; 374

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3718

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Gly	Ile	Leu	Leu	Glu	Pro	Cys	Ser	Asp	Arg	Gly	Asp	Ser	Glu	Asp	Gly
			20					25					30		
Cys	Leu	Glu	Arg	Glu	Glu	Tyr	Leu	Leu	Phe	Asp	Ser	Asp	Lys	Leu	Ser
			35				40					45			
His	Leu	Ile	Leu	Asp	Ser	Ser	Ser	Lys	Ile	Cys	Asp	Leu	Asn	Ala	Asn
	50					55				60					
Thr	Glu	Ser	Glu	Val	Pro	Gly	Gly	Gln	Ser	Val	Gly	Val	Gln	Gly	Glu
65				70				75					80		
Ala	Ala	Cys	Val	Ser	Ile	Pro	His	Leu	Asp	Leu	Lys	Asn	Val	Ser	Asp
			85					90				95			
Gly	Asp	Lys	Trp	Glu	Glu	Pro	Phe	Pro	Ala	Phe	Lys	Ser	Trp	Gln	Glu
			100					105				110			
Asp	Ser	Glu	Ser	Gly	Glu	Ala	Gln	Leu	Ser	Pro	Gln	Ala	Gly	Arg	Met
	115					120					125				
Asn	His	His	Pro	Leu	Glu	Glu	Asp	Cys	Pro	Pro	Val	Leu	Ser	His	Arg



130 135 140  
 Ser Leu Asp Phe Gly Gln Ser Gln Arg Phe Leu His Asp Pro Glu Lys  
 145 150 155 160  
 Leu Asp Ser Ser Ser Lys Ala Leu Ser Phe Thr Arg Ile Arg Arg Ser  
 165 170 175  
 Ser Phe Ser Ser Lys Asp Glu Lys Arg Glu Asp Arg Thr Pro Tyr Gln  
 180 185 190  
 Leu Val Lys Lys Leu Gln Lys Lys Ile Arg Gln Phe Glu Glu Gln Phe  
 195 200 205  
 Glu Arg Glu Arg Asn Ser Lys Pro Ser Tyr Ser Asp Ile Ala Ala Asn  
 210 215 220  
 Pro Lys Val Leu Lys Trp Met Thr Glu Leu Thr Lys Leu Arg Lys Gln  
 225 230 235 240  
 Ile Lys Asp Ala Lys His Lys Asn Ser Asp Gly Glu Phe Val Pro Gln  
 245 250 255  
 Thr Arg Pro Arg Ser Asn Thr Leu Pro Lys Ser Phe Gly Ser Ser Leu  
 260 265 270  
 Asp His Glu Asp Glu Glu Asn Glu Asp Glu Pro Lys Val Ile Gln Lys  
 275 280 285  
 Glu Lys Lys Pro Ser Lys Glu Ala Thr Leu Glu Leu Ile Leu Lys Arg  
 290 295 300  
 Leu Lys Glu Lys Arg Ile Glu Arg Cys Leu Pro Glu Asp Ile Lys Lys  
 305 310 315 320  
 Met Thr Lys Asp His Leu Val Glu Glu Lys Ala Ser Leu Gln Lys Ser  
 325 330 335  
 Leu Leu Tyr Tyr Glu Ser Gln His Gly Arg Pro Val Thr Lys Glu Glu  
 340 345 350  
 Arg His Ile Val Lys Pro Leu Tyr Asp Arg Tyr Arg Leu Val Lys Gln  
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 Met Leu Thr Arg Ala Ser  
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<210> 3719  
 <211> 422  
 <212> DNA  
 <213> Homo sapiens

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 422

<210> 3720  
 <211> 122  
 <212> PRT  
 <213> Homo sapiens

<400> 3720

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			20					25					30		
Asn	Gln	Lys	Lys	Phe	Glu	Cys	Asn	Ser	Arg	Gln	Pro	Gly	Cys	Lys	Asn
		35					40					45			
Val	Cys	Phe	Asp	Asp	Phe	Phe	Pro	Ile	Ser	Gln	Val	Arg	Leu	Trp	Ala
	50					55					60				
Leu	Gln	Leu	Ile	Met	Val	Ser	Thr	Pro	Ser	Leu	Leu	Val	Val	Leu	His
65					70					75					80
Val	Ala	Tyr	His	Glu	Gly	Arg	Glu	Lys	Arg	His	Arg	Lys	Lys	Leu	Tyr
			85					90					95		
Val	Ser	Pro	Gly	Thr	Met	Asp	Gly	Gly	Leu	Trp	Tyr	Ala	Tyr	Leu	Ile
			100					105					110		
Ser	Leu	Ile	Val	Lys	Thr	Gly	Phe	Glu	Thr						
			115					120							

<210> 3721  
 <211> 4728  
 <212> DNA  
 <213> Homo sapiens

<400> 3721

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 720

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960  
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 <211> 1216  
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 <213> Homo sapiens

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 Ala Arg Met Val Gln Ser Gly Gly Cys Ser Ala Asn Asp Ser Arg Glu  
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 Val Phe Lys Lys His Ile Glu Lys Arg Val Arg Ser Leu Pro Glu Ile  
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 Met Thr Ala Ser Ala Ala Ser Glu Leu Ile Leu Ser Lys Glu Gln Leu

2871



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Gln	Gln	Asn	Glu	Glu	His	His	Ala	Glu	Pro	His	Val	Asp	Lys	Gly	Glu
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Gln	Asp	Leu	Phe	Ala	Pro	Leu	Val	Val	Arg	Tyr	Val	Asp	Leu	Met	Glu
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 Ile Arg Met Val Lys Lys Thr Tyr Arg Asp Phe Arg Leu Gln Gly Val  
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 Leu Asp Ser Thr Leu Asn Ser Lys Thr Tyr Glu Thr Ile Arg Asn Arg  
                                  1170                      1175                      1180  
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&lt;210&gt; 3723

&lt;211&gt; 830

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3723

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<211> 203

<212> PRT

<213> Homo sapiens

<400> 3724

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			100					105					110		
Phe	Glu	Ala	Val	Ser	Asp	Glu	Ala	Lys	Asp	Phe	Val	Ser	Asn	Leu	Ile
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Pro	Trp	Leu	Asn	Asn	Leu	Ala	Glu	Lys	Ala	Lys	Arg	Cys	Asn	Arg	Arg
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Lys	Lys	Asn	Phe	Ile	Ala	Val	Ser	Ala	Ala	Asn	Arg	Phe	Lys	Lys	Ile
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<211> 1244

<212> DNA

<213> Homo sapiens

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<211> 325

<212> PRT

<213> Homo sapiens

<400> 3726

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Gly	Arg	Glu	Leu	Asp	Phe	Arg	Ser	Asp	His	Leu	His	Phe	Cys	Phe	Gln
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Ala	Phe	Lys	Ile	Val	Pro	Tyr	Asn	Thr	Glu	Thr	Leu	Asp	Lys	Leu	Leu
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Thr	Glu	Ser	Leu	Lys	Asn	Asn	Ile	Pro	Ala	Ser	Gly	Leu	His	Leu	Phe
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Gly	Ile	Asn	Gln	Leu	Glu	Glu	Glu	Asp	Met	Met	Thr	Asn	Gln	Arg	Asp
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Glu	Glu	Leu	Pro	Thr	Leu	Leu	His	Phe	Ala	Ala	Lys	Tyr	Gly	Leu	Lys
			100					105					110		
Asn	Leu	Thr	Ala	Leu	Leu	Leu	Thr	Cys	Pro	Gly	Ala	Leu	Gln	Ala	Tyr

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 Ser Val Ala Asn Lys His Gly His Tyr Pro Asn Thr Ile Ala Glu Lys  
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 His Gly Phe Arg Asp Leu Arg Gln Phe Ile Asp Glu Tyr Val Glu Thr  
 145 150 155 160  
 Val Asp Met Leu Lys Ser His Ile Lys Glu Glu Leu Met His Gly Glu  
 165 170 175  
 Glu Ala Asp Ala Val Tyr Glu Ser Met Ala His Leu Ser Thr Asp Leu  
 180 185 190  
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 195 200 205  
 Ser Met Ala Ala Phe Val Pro Ala Ala Thr Glu Asp Leu Tyr Val Glu  
 210 215 220  
 Met Leu Gln Ala Ser Thr Ser Asn Pro Ile Pro Gly Asp Gly Phe Ser  
 225 230 235 240  
 Arg Ala Thr Lys Asp Ser Met Ile Arg Lys Phe Leu Glu Gly Asn Ser  
 245 250 255  
 Met Gly Met Thr Asn Leu Glu Arg Asp Gln Cys His Leu Gly Gln Glu  
 260 265 270  
 Glu Asp Val Tyr His Thr Val Asp Asp Asp Glu Ala Phe Ser Val Asp  
 275 280 285  
 Leu Ala Ser Arg Pro Pro Val Pro Val Pro Arg Pro Glu Thr Thr Ala  
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 Pro Gly Ala His Gln Leu Pro Asp Asn Glu Pro Tyr Ile Phe Lys Gly  
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 Lys Tyr Gly Arg Glu  
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&lt;210&gt; 3727

&lt;211&gt; 630

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3727

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<400> 3728  
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Val Thr Pro Thr Pro Ala Gly Thr Leu Asp Pro Ala Glu Lys Gln Glu  
35 40 45  
Thr Gly Cys Pro Pro Leu Gly Leu Glu Ser Leu Arg Val Ser Asp Ser  
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Arg Leu Glu Ala Ser Ser Ser Gln Ser Phe Gly Leu Gly Pro His Arg  
65 70 75 80  
Gly Arg Leu Asn Ile Gln Ser Gly Leu Glu Asp Gly Asp Leu Tyr Asp  
85 90 95  
Gly Ala Trp Cys Ala Glu Glu Gln Asp Ala Asp Pro Trp Phe Gln Val  
100 105 110  
Asp Ala Gly His Pro Thr Arg Phe Ser Gly Val Ile Thr Gln Gly Arg  
115 120 125  
Asn Ser Val Trp Arg Tyr Asp Trp Val Thr Ser Tyr Lys Val Gln Phe  
130 135 140  
Ser Asn Asp Ser Arg Thr Trp Trp Gly Ser Arg Asn His Ser Ser Gly  
145 150 155 160  
Met Asp Ala Val Phe Pro Ala Asn Ser Asp Pro Glu Thr Pro Val Leu  
165 170 175  
Asn Leu Leu Pro Glu Pro Gln Val Ala Arg Phe Ile Arg Leu Leu Pro  
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<210> 3729  
<211> 1552  
<212> DNA  
<213> Homo sapiens

<400> 3729  
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 780  
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&lt;210&gt; 3730

&lt;211&gt; 422

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3730

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Cys	Pro	Leu	Pro	Gln	Glu	Met	Lys	Ala	Leu	Phe	Lys	Lys	Lys	Thr	Tyr				
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Asp	Glu	Lys	Lys	Thr	Tyr	Asp	Gln	Gln	Lys	Phe	Asp	Ser	Glu	Arg	Ala				
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Asp	Gly	Thr	Ile	Ser	Ser	Glu	Ile	Lys	Ser	Ala	Arg	Gly	Ser	His	His				
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Leu	Ser	Ile	Tyr	Ala	Glu	Asn	Ser	Leu	Lys	Ser	Asp	Gly	Tyr	His	Lys				
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Lys	Pro	Glu	Phe	Glu	Phe	Thr	Thr	Leu	Asp	Phe	Pro	Glu	Leu	Gln	Gly				
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Val	His	Ser	Val	Ser	Thr	Asp	Ile	Ser	Leu	Leu	Arg	Glu	Val	Val	Lys				
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Pro	Ala	Ala	Val	Leu	Ser	Lys	Gly	Glu	Ile	Val	Val	Lys	Asn	Asn	Pro				
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Arg	Glu	Leu	Ser	Trp	Thr	Pro	Met	Gly	Tyr	Val	Val	Arg	Gln	Thr	Leu				
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Leu	Lys	Thr	Ile	Ala	Ser	Ser	Ala	Asp	Pro	Lys	Asn	Val	Ser	Ile	Pro				
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Ser	Ser	Glu	Ala	Leu	Ser	Ser	Asp	Pro	Ser	Tyr	Asn	Lys	Glu	Lys	His				
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Glu	Gln	Asn	Glu	Ala	Ser	Arg	Lys	Asn	Lys	Lys	Lys	Lys	Glu	Lys	Ser				
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Thr	Ser	Lys	Tyr	Glu	Val	Leu	Thr	Val	Gln	Glu	Pro	Pro	Arg	Ile	Glu				
				325					330					335					
Asp	Ala	Glu	Glu	Phe	Pro	Asn	Leu	Ala	Val	Ala	Ser	Glu	Arg	Arg	Asp				
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Arg	Ile	Glu	Thr	Pro	Lys	Phe	Gln	Ser	Lys	Gln	Gln	Pro	Gln	Asp	Asn				
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Phe	Lys	Asn	Asn	Val	Lys	Lys	Ser	Gln	Leu	Pro	Val	Gln	Leu	Asp	Leu				
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Gly	Gly	Met	Leu	Thr	Ala	Leu	Glu	Lys	Lys	Gln	His	Ser	Gln	His	Ala				
385					390					395					400				
Lys	Gln	Ser	Ser	Lys	Pro	Val	Val	Val	Ser	Val	Gly	Ala	Val	Pro	Val				
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Leu	Ser	Lys	Glu	Cys	Ala														
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&lt;210&gt; 3731

&lt;211&gt; 1704

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens



&lt;400&gt; 3731

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 Glu Gly Ile Thr Asp Ala Ser Ser Cys Ala Val Leu Leu Pro Ala Ser  
 35 40 45  
 Leu Phe Val Asn Ser His Pro Gly Ile Asp Arg Pro Gly Met Leu Cys  
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 Ser Phe Arg Ile Pro Gly Ala Trp Ser Cys Ala Trp Ser Leu Asn Ile  
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 Gln Ala Asn Asn Cys Phe Ser Thr Gly Leu Ser Arg Arg Val Leu Leu  
 85 90 95  
 Thr Asn Val Val Thr Gly His Arg Gln Ser Phe Gly Thr Asn Ser Asp  
 100 105 110  
 Val Leu Ala Gln Gln Phe Ala Leu Met Ala Pro Leu Leu Phe Asn Gly  
 115 120 125  
 Cys Arg Ser Gly Glu Ile Phe Ala Ile Asp Leu Arg Cys Gly Asn Gln  
 130 135 140  
 Gly Lys Gly Trp Lys Ala Thr Arg Leu Phe His Asp Ser Ala Val Thr  
 145 150 155 160  
 Ser Val Arg Ile Leu Gln Asp Glu Gln Tyr Leu Met Ala Ser Asp Met  
 165 170 175  
 Ala Gly Lys Ile Lys Leu Trp Asp Leu Arg Thr Thr Lys Cys Val Arg  
 180 185 190  
 Gln Tyr Glu Gly His Val Asn Glu Tyr Ala Tyr Leu Pro Leu His Val  
 195 200 205  
 His Glu Glu Glu Gly Ile Leu Val Ala Val Gly Gln Asp Cys Tyr Thr  
 210 215 220  
 Arg Ile Trp Ser Leu His Asp Ala Arg Leu Leu Arg Thr Ile Pro Ser  
 225 230 235 240  
 Pro Tyr Pro Ala Ser Lys Ala Asp Ile Pro Ser Val Ala Phe Ser Ser  
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 Gln Asp Leu Tyr Cys Tyr Ser Tyr Ser  
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 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 3733

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&lt;210&gt; 3734

&lt;211&gt; 171

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3734

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			20					25					30		
Gly	Lys	Asp	Pro	Gly	Ser	Ala	Pro	Ser	Ser	Val	Arg	Glu	Arg	Glu	Thr
		35					40				45				
Pro	Gly	Ala	Xaa	Pro	Cys	Leu	Pro	Arg	Arg	Gly	Trp	Cys	Val	Pro	Gly
	50					55					60				
Asp	Val	Arg	Ser	Ser	Pro	Pro	Leu	Pro	Gly	Trp	Cys	Ala	Leu	Ser	Asp
65					70				75					80	
Val	Arg	Ser	Arg	Gly	Arg	Ser	Cys	Pro	Ser	Ala	Pro	Lys	Ala	Ala	Gly
			85						90					95	
Gly	Leu	Arg	Ala	Trp	Gly	Arg	Gly	Ser	Gly	Ala	Ala	Arg	Ala	Pro	Ala
			100					105						110	
Pro	Ala	Pro	Ser	Pro	Ser	Ser	Gly	Xaa	Ser	Pro	Ser	Ser	Arg	Thr	Pro
		115					120					125			
Arg	Asp	Trp	Ser	Ala	Ser	Arg	Cys	Trp	Thr	Trp	Ser	Gly	Ala	Ala	Thr
	130					135					140				
Ala	Pro	Thr	Pro	Phe	Ser	Pro	Ala	Gln	Gln	Pro	Pro	Ser	Ser	His	Asp
145					150					155				160	
Gly	Leu	Ser	Leu	Asp	Pro	Ser	Gln	Leu	Glu	Pro					
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&lt;210&gt; 3735

&lt;211&gt; 2512

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3735

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360  
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420  
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480  
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780  
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1140  
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 2512

&lt;210&gt; 3736

&lt;211&gt; 155

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3736

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Ser	Gly	Arg	Pro	Ser	Ala	Thr	Gln	Lys	Lys	Lys	Met	Lys	Lys	Arg	Val
			20					25						30	
Lys	Asp	Glu	Leu	Arg	Lys	Leu	Asn	Thr	Met	Pro	Ala	Ala	Glu	Ala	Asn
		35					40					45			
Glu	Ile	Glu	Asp	Val	Trp	His	Leu	Asp	Leu	Ser	Ser	Arg	Trp	Gln	Leu
	50					55				60					
Tyr	Arg	Leu	Trp	Leu	Gln	Leu	Tyr	Gln	Ala	Asp	Thr	Pro	Pro	Gly	Lys
65					70					75				80	
Ile	Leu	Ser	Tyr	Glu	Arg	Gln	Tyr	Arg	Thr	Ser	Ala	Glu	Arg	Met	Ala
			85					90						95	
Glu	Leu	Arg	Leu	Gln	Glu	Asp	Leu	His	Ile	Leu	Lys	Asp	Ala	Gln	Val
			100					105						110	
Val	Gly	Met	Thr	Thr	Thr	Gly	Ala	Ala	Lys	Tyr	Arg	Gln	Ile	Leu	Gln

	115		120		125										
Lys	Val	Glu	Pro	Arg	Ile	Val	Ile	Val	Glu	Glu	Ala	Ala	Glu	Val	Leu
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Glu	Ala	His	Thr	Ile	Ala	Thr	Leu	Ser	Lys	Ala					
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 <211> 1046  
 <212> DNA  
 <213> Homo sapiens

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 1046

<210> 3738  
 <211> 348  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 3738

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 Cys Val Cys Tyr Asn Glu Pro Lys Val Thr Thr Ser Cys Pro Gln Gln  
 20 25 30  
 Gly Leu Gln Ala Val Pro Val Gly Ile Pro Ala Ala Ser Gln Arg Ile  
 35 40 45  
 Phe Leu His Gly Asn Arg Ile Ser His Val Pro Ala Ala Ser Phe Arg  
 50 55 60  
 Ala Cys Arg Asn Leu Thr Ile Leu Trp Leu His Ser Asn Val Leu Ala  
 65 70 75 80  
 Arg Ile Asp Ala Ala Ala Phe Thr Gly Leu Ala Leu Leu Gly Ala Leu  
 85 90 95  
 Asp Leu Ser Asp Asn Ala Gln Leu Arg Ser Val Asp Pro Ala Thr Phe  
 100 105 110  
 His Gly Leu Gly Arg Leu His Thr Leu His Leu Asp Arg Cys Gly Leu  
 115 120 125  
 Gln Glu Leu Gly Pro Gly Leu Phe Arg Gly Leu Ala Ala Leu Gln Tyr  
 130 135 140  
 Leu Tyr Leu Gln Asp Asn Ala Leu Gln Ala Leu Pro Asp Asp Thr Phe  
 145 150 155 160  
 Arg Asp Leu Gly Asn Leu Thr His Leu Phe Leu His Gly Asn Arg Ile  
 165 170 175  
 Ser Ser Val Pro Glu Arg Ala Phe Arg Gly Leu His Ser Leu Asp Arg  
 180 185 190  
 Leu Leu Leu His Gln Asn Arg Val Ala His Val His Pro His Ala Phe  
 195 200 205  
 Arg Asp Leu Gly Arg Leu Met Thr Leu Tyr Leu Phe Ala Asn Asn Leu  
 210 215 220  
 Ser Ala Leu Pro Thr Glu Ala Leu Ala Pro Leu Arg Ala Leu Gln Tyr  
 225 230 235 240  
 Leu Arg Leu Asn Asp Asn Pro Trp Val Cys Asp Cys Arg Ala Arg Pro  
 245 250 255  
 Leu Trp Ala Trp Leu Gln Lys Phe Arg Gly Ser Ser Ser Glu Val Pro  
 260 265 270  
 Cys Ser Leu Pro Gln Arg Leu Ala Gly Arg Asp Leu Lys Arg Leu Ala  
 275 280 285  
 Ala Asn Asp Leu Gln Gly Cys Ala Val Ala Thr Gly Pro Tyr His Pro  
 290 295 300  
 Ile Trp Thr Gly Arg Ala Thr Asp Glu Glu Pro Leu Gly Leu Pro Lys  
 305 310 315 320  
 Cys Cys Gln Pro Asp Ala Ala Asp Lys Ala Ser Val Leu Glu Pro Gly  
 325 330 335  
 Arg Pro Ala Ser Ala Gly Asn Ala Leu Lys Gly Arg  
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&lt;210&gt; 3739

&lt;211&gt; 1252

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3739

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 240  
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 aactttggat tcccaaccag taaatcttag caagatctga gtttctccag gtatgatatt  
 720  
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 1252

&lt;210&gt; 3740

&lt;211&gt; 139

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3740

Met	Gly	Lys	Phe	Leu	His	Gln	Gly	Leu	Gly	Glu	Ser	Thr	Gly	Ser	Pro
1				5				10						15	
Gly	Gln	Trp	Glu	Ser	Ala	Ala	Pro	Pro	Val	Trp	Arg	Pro	Arg	Ala	His
			20					25						30	
Ser	Thr	Glu	Ala	Pro	Gly	His	Pro	Gln	Glu	Asp	Gly	Lys	Gly	Gln	Leu
			35				40					45			
Ala	Gly	Glu	Ser	Pro	Gly	His	Arg	Glu	Pro	Ser	Pro	Gly	Ser	Lys	Gln

50	55	60
Asp Leu Pro Ser Asp Cys Leu Arg Asn Ala Gly Trp Thr Ser Arg Asn		
65	70	75
Phe Pro Phe Thr Gly Gln Pro Ala Ala Ala Pro Pro Arg Leu Gly Pro		80
	85	90
Ala Pro Gly Ala Ala Asp Arg Pro Ser Arg Val Pro Lys Ser Pro Ala		95
	100	105
Leu Ala Gln Lys Leu Gly Gln Pro Arg Asp Pro His Leu Pro Leu Pro		110
	115	120
Ile Ser Pro Leu Ser Gln Pro Pro Pro Ser Pro		125
130	135	

<210> 3741  
 <211> 562  
 <212> DNA  
 <213> Homo sapiens

<400> 3741  
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 gtcgtgtcca ctgtggggat ccacgtcctg actaaccttg tgttcctaga aatccctcac  
 120  
 cggcagatcg gtgcctcctg aatcccaccc aaaattccca ctgggaatgt gttcctgaaa  
 180  
 gagctgcccc ggcttgagaa agcctctttt cagaccaaac ttcgtattca aagctcaaaa  
 240  
 agaactgcac acaattagga cagtcataca agatgctgcc cctaactctg ccacaatctg  
 300  
 cgagaaggga ggcggggctt ccgagggcaa agtgcccctg ggaagggatc cgcaggggaac  
 360  
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 420  
 ctctgcgctc gcacacggga ttcattctccg ccgcctctgc ccgtttccag caacacggag  
 480  
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 540  
 ctgggctgct ttcattcacgc gt  
 562

<210> 3742  
 <211> 138  
 <212> PRT  
 <213> Homo sapiens

<400> 3742
Met Gly Trp Arg Asn Cys Phe Arg Leu Ala Pro Cys Cys Trp Lys Arg
1 5 10 15
Ala Glu Ala Ala Glu Met Asn Pro Val Cys Glu Arg Arg Ala Leu Ser
20 25 30
Pro Ala Arg Ala Cys Ser Pro Arg Gly Trp Gly Leu Trp Ser Phe Gln
35 40 45
Ser Cys Ser Leu Arg Ile Pro Ser Gln Gly His Phe Ala Leu Gly Ser
50 55 60
Pro Ala Ser Leu Leu Ala Asp Cys Gly Arg Ile Arg Gly Ser Ile Leu

```

65              70              75              80
Tyr Asp Cys Pro Asn Cys Val Gln Phe Phe Leu Ser Phe Glu Tyr Glu
              85              90              95
Val Trp Ser Glu Lys Arg Leu Ser Gln Ala Trp Ala Ala Leu Ser Gly
              100             105             110
Thr His Ser Gln Trp Glu Phe Trp Val Gly Phe Arg Arg His Arg Ser
              115             120             125
Ala Gly Glu Gly Phe Leu Gly Thr Gln Gly
              130             135

```

&lt;210&gt; 3743

&lt;211&gt; 468

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3743

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ggcaatgcaa gctgcacagt cagtctaggg ggtgccaata tggcagagac ccacaaagcc
120
atgatcctgc aactcaatcc cagtgagaac tgcacctgga caatagaaag accagaaaac
180
aaaagcatca gaattatctt ttcctatgtc cagcttgatc cagatggaag ctgtgaaagt
240
gaaaacatta aagtctttga cggaacctcc agcaatgggc ctctgctagg gcaagtctgc
300
agtaaaaacg actatgttcc tgtatttgaa tcatcatcca gtacattgac gtttcaaata
360
gttactgact cagcaagaat tcaaagaact gtctttgtgt tctagtagtt cttatttcct
420
aacatcttta ttccaaagtg tggcggttac ctggatccct ggaaggat
468

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&lt;210&gt; 3744

&lt;211&gt; 134

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3744

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Xaa His Glu Pro Ser Tyr Lys Leu His Phe Gly Lys Ala Leu Thr Met
1              5              10              15
Ala Glu Ala Glu Gly Asn Ala Ser Cys Thr Val Ser Leu Gly Gly Ala
              20              25              30
Asn Met Ala Glu Thr His Lys Ala Met Ile Leu Gln Leu Asn Pro Ser
              35              40              45
Glu Asn Cys Thr Trp Thr Ile Glu Arg Pro Glu Asn Lys Ser Ile Arg
              50              55              60
Ile Ile Phe Ser Tyr Val Gln Leu Asp Pro Asp Gly Ser Cys Glu Ser
65              70              75              80
Glu Asn Ile Lys Val Phe Asp Gly Thr Ser Ser Asn Gly Pro Leu Leu
              85              90              95
Gly Gln Val Cys Ser Lys Asn Asp Tyr Val Pro Val Phe Glu Ser Ser
              100             105             110
Ser Ser Thr Leu Thr Phe Gln Ile Val Thr Asp Ser Ala Arg Ile Gln

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115  
Arg Thr Val Phe Val Phe  
130

120

125

<210> 3745  
<211> 345  
<212> DNA  
<213> Homo sapiens

<400> 3745  
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gacgctgtgg gagaggaaaa cagccacatg tgggctggct gcttggagga gacacatgag  
120  
ccgtgaacac gtctcccccg gccgctccct gggtccatgc gtgctcgtct tgggcaccac  
180  
gagaacacag ccatgcagcc cccgatcctg cagccacagc cacggcatcg cctggtcgga  
240  
tgcagcatct gctccggacg cctctcgtcg tcgggtgccag gcctgccagg ccaagccccg  
300  
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345

<210> 3746  
<211> 102  
<212> PRT  
<213> Homo sapiens

<400> 3746  
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Thr Cys Gly Leu Ala Ala Trp Arg Arg His Met Ser Arg Glu His Val  
20 25 30  
Ser Pro Gly Arg Ser Leu Val Pro Cys Val Leu Val Leu Gly Thr Thr  
35 40 45  
Arg Thr Gln Pro Cys Ser Pro Arg Ser Cys Ser His Ser His Gly Ile  
50 55 60  
Ala Trp Ser Asp Ala Ala Ser Ala Pro Asp Ala Ser Arg Cys Arg Cys  
65 70 75 80  
Gln Ala Cys Gln Ala Lys Pro Arg Phe Ser Gly Ala Ala Gly Gly Gly  
85 90 95  
Arg His Val Trp Ala Asp  
100

<210> 3747  
<211> 800  
<212> DNA  
<213> Homo sapiens

<400> 3747  
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cgcgccggac cctgggatgc tcttcggccg catcccgtg cgctacgcca tactggtgag  
120

aagggggcgc gcccgccac tttctgcctg agccccgcac cctctctggt ggtctcctct  
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 ggggcgcccc tgccaatccc cgtttccccc tcccgagat gcagatgcgc ttcgatggac  
 240  
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 360  
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 480  
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 660  
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 720  
 acacactcat ccatgtctct ctgctgttcc ctattgacag tgtgatagat tatcacatta  
 780  
 tctaggtgtg gcaacctagg  
 800

&lt;210&gt; 3748

&lt;211&gt; 138

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3748

Met	Gln	Met	Arg	Phe	Asp	Gly	Arg	Leu	Gly	Phe	Pro	Gly	Gly	Phe	Val
1				5					10					15	
Asp	Thr	Gln	Asp	Arg	Ser	Leu	Glu	Asp	Gly	Leu	Asn	Arg	Glu	Leu	Arg
			20					25					30		
Glu	Glu	Leu	Gly	Glu	Ala	Ala	Ala	Ala	Phe	Arg	Val	Glu	Arg	Thr	Asp
		35				40					45				
Tyr	Arg	Ser	Ser	His	Val	Gly	Val	Arg	Ala	Thr	Arg	Cys	Gly	Pro	Leu
	50					55					60				
Leu	Cys	Gln	Ala	Ser	Asp	Ala	Arg	Gly	Ala	Val	Gly	Cys	Gly	Gly	Arg
65				70				75						80	
Arg	Asn	Thr	Arg	Gln	Gly	Pro	Arg	Ala	Gly	Gly	Gly	Thr	Ser	Leu	Gly
			85					90						95	
Leu	Cys	Pro	Phe	Pro	Asn	Phe	Leu	Phe	Ser	Gln	Ser	Phe	Leu	Ser	Pro
		100						105					110		
Lys	Lys	Ala	Ser	Leu	Glu	Lys	Ser	Leu	Cys	Pro	Ser	Asp	Leu	Ala	Leu
		115					120					125			
Ser	Pro	Ala	Phe	Leu	Val	Glu	Leu	Gly	Ser						
		130					135								

&lt;210&gt; 3749

&lt;211&gt; 648

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3749

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 ccacaacagc acgagtggcc tcccctgctg cagttacggc ctgaggatgt cggcttcgac  
 120  
 ggctactcca tgcctcggga gggatcgaca agcaagcaga tgccccccag tgatgctgaa  
 180  
 ggtgaccgc tgatgaacat gctgatgagg ctgcaggagg cagccaacta ctccagcccc  
 240  
 cagagctatg acagcgactc caacagcaac agccatcacg atgacatctt ggactcctct  
 300  
 ttggagtcca ctctgtgaca ggggccccgga gccagcgcc ctctcttctt cctcaccgca  
 360  
 ttccacctgc atccccaca tcaccctgaa gatgacttcc tgagccagcc cccagccaca  
 420  
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 480  
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 600  
 tctcgggaaa ggatcatcgc cgttgaaatg aaaaaaaaaa aaaaaaaaaa  
 648

&lt;210&gt; 3750

&lt;211&gt; 105

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3750

Arg	Ala	Pro	Trp	Glu	Asp	Pro	Ala	Lys	Trp	Val	Met	Asp	Thr	Tyr	Pro
1				5					10					15	
Trp	Ala	Ala	Ser	Pro	Gln	Gln	His	Glu	Trp	Pro	Pro	Leu	Leu	Gln	Leu
			20					25					30		
Arg	Pro	Glu	Asp	Val	Gly	Phe	Asp	Gly	Tyr	Ser	Met	Pro	Arg	Glu	Gly
		35				40					45				
Ser	Thr	Ser	Lys	Gln	Met	Pro	Pro	Ser	Asp	Ala	Glu	Gly	Asp	Pro	Leu
	50				55						60				
Met	Asn	Met	Leu	Met	Arg	Leu	Gln	Glu	Ala	Ala	Asn	Tyr	Ser	Ser	Pro
65				70					75					80	
Gln	Ser	Tyr	Asp	Ser	Asp	Ser	Asn	Ser	Asn	Ser	His	His	Asp	Asp	Ile
			85				90						95		
Leu	Asp	Ser	Ser	Leu	Glu	Ser	Thr	Leu							
			100				105								

&lt;210&gt; 3751

&lt;211&gt; 554

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3751

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 120  
 acgcagggcc agagtccgga gccgcggacc cgcgaggtat ttctactacg tggaccacca  
 180  
 gggccagctt ttcctggatg attccaaaat gaagaatttc atcacctgct tcaaagaccc  
 240  
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 cgctttcccc ttcctctcgc cctgcggcag agagcgcaac ttcctgcgct gcgaggaccg  
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 420  
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 540  
 ttcgcccctg gccc  
 554

<210> 3752  
 <211> 66  
 <212> PRT  
 <213> Homo sapiens

<400> 3752  
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 Pro His His Gly Pro Gly Pro Ala Ala Ala Arg Gly Ser Val Ala Pro  
 20 25 30  
 Ser Gly Ala Lys Gly Val Ser Tyr Thr Gln Gly Gln Ser Pro Glu Pro  
 35 40 45  
 Arg Thr Arg Glu Val Phe Leu Leu Arg Gly Pro Pro Gly Pro Ala Phe  
 50 55 60  
 Pro Gly  
 65

<210> 3753  
 <211> 1426  
 <212> DNA  
 <213> Homo sapiens

<400> 3753  
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 120  
 gcctaggctc cggagatcgg gccatctggg ctctgaaagc aaattagttt tccaactcat  
 180  
 gtctggctcc ggcgttaccc agacgcctgg aaggtecttc ctgcagtctg atcaccattt  
 240  
 ttctgctgc actgaccaat cagctcccct tggccttcaa cctcgggaat gatggattag  
 300  
 gggagtctag aaatggacga agccctagaa acgcagctga agacgagcag aggacgcttc  
 360



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 480  
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 540  
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 600  
 gacacaacag agacatcggg ccctggaaac catccagaac gctgtggagt gccgagccct  
 660  
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 720  
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 900  
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 960  
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 1080  
 agcggcagcg gccctagcg gacgcgtggc cctgagttgg gggagcgacc cttccccag  
 1140  
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 1200  
 ttgagatgac tgtccctcct ccctggagct ccagagaccc acccctctcc aggttatccc  
 1260  
 agaaatgacc caactctctc acttttcctt ctccccttg aataaagtcg ccagctaaaa  
 1320  
 aaaaagtcca tgtccacctg agataagagc tgttggctgg attggggggg ccacatgcga  
 1380  
 cccatcggcc tgacgtgggt gctgcaactg acctcggcat ggatcc  
 1426

&lt;210&gt; 3754

&lt;211&gt; 261

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3754

Met Asp Glu Ala Leu Glu Thr Gln Leu Lys Thr Ser Arg Gly Arg Phe  
 1 5 10 15  
 Ser Ala Thr Glu Ser Leu Pro Thr Leu Glu Leu Leu Ser Gln Val Asp  
 20 25 30  
 Met Asp Cys Arg Val His Met Arg Pro Ile Gly Leu Thr Trp Val Leu  
 35 40 45  
 Gln Leu Thr Leu Ala Trp Ile Leu Leu Glu Ala Cys Gly Gly Ser Arg  
 50 55 60  
 Pro Leu Gln Ala Arg Ser Gln Gln His His Gly Leu Ala Ala Asp Leu  
 65 70 75 80  
 Gly Lys Gly Lys Leu His Leu Ala Gly Pro Cys Cys Pro Ser Glu Met

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<210> 3755
<211> 3149
<212> DNA
<213> Homo sapiens
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<400> 3755
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120
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&lt;210&gt; 3756

&lt;211&gt; 199

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3756

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			20					25					30		
Ser	Glu	Glu	Thr	Thr	Ser	Asp	Asn	Asn	Asn	Thr	Ser	Ile	Thr	Thr	Pro
			35				40					45			
Thr	Leu	Ser	Pro	Ser	Gln	Gln	Pro	Leu	Pro	Thr	Glu	Leu	Asn	Val	Thr
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Ser	Leu	Ile	Thr	Pro	Thr	Lys	Arg	Ser	Cys	Gly	Thr	Asp	Ser	Gln	Ser
			85					90						95	
Glu	Asn	Glu	Ala	Ser	Pro	Val	Lys	Arg	Pro	Arg	Leu	Leu	Glu	Asn	Thr
			100					105					110		
Glu	Arg	Ser	Glu	Glu	Thr	Ser	Arg	Ser	Lys	Gln	Lys	Ser	Arg	Arg	Arg
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Cys	Phe	Gln	Cys	Gln	Thr	Lys	Leu	Glu	Leu	Val	Gln	Gln	Glu	Leu	Gly
			130			135					140				
Ser	Cys	Arg	Cys	Gly	Tyr	Val	Phe	Cys	Met	Leu	His	Arg	Leu	Pro	Glu

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&lt;210&gt; 3757

&lt;211&gt; 1046

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3757

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&lt;210&gt; 3758

&lt;211&gt; 199

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3758

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 20 25 30  
 Gly Lys Ser Gly Leu Leu Thr Ser His Thr Thr Asp Ser Leu Gln Leu  
 35 40 45  
 Trp Phe Val Arg Leu Ala Leu Leu Val Lys Leu Gly Leu Phe Gln Asn  
 50 55 60  
 Ala Glu Met Glu Phe Glu Pro Phe Gly Asn Leu Asp Gln Pro Asp Leu  
 65 70 75 80  
 Tyr Ser Glu Tyr Tyr Pro His Val Tyr Pro Gly Arg Arg Gly Ser Met  
 85 90 95  
 Val Pro Phe Ser Met Arg Ile Leu His Ala Glu Leu Gln Gln Tyr Leu  
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 Gly Asn Pro Gln Glu Ser Leu Asp Arg Leu His Lys Val Lys Thr Val  
 115 120 125  
 Cys Ser Lys Val Gly Gly Ala Val Ile Leu Pro Cys His Gly Glu Asn  
 130 135 140  
 Met Pro Ser Thr Pro Ser Pro Gln Asp Met Pro Val Leu Phe Pro Ala  
 145 150 155 160  
 Arg Pro Ala Pro Cys Thr Ile Ala Ala Ser Ala Phe Arg Arg Leu Gly  
 165 170 175  
 Asp Pro Gly Leu Cys Gly Leu Val Val Val Ala Leu Ala Glu Ile Phe  
 180 185 190  
 Phe Arg Asp Gly Lys Ser Phe  
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&lt;210&gt; 3759

&lt;211&gt; 830

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3759

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&lt;210&gt; 3760

&lt;211&gt; 100

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3760

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			20					25					30		
Cys	Asp	Arg	Glu	Leu	Tyr	Pro	Gly	Glu	Pro	Arg	Leu	His	Leu	Ser	Ala
			35				40					45			
Pro	Gly	Pro	Ala	Ser	His	Gln	Asp	Gln	Pro	Glu	Trp	Gln	Glu	Asp	Met
	50					55					60				
Gly	Arg	Thr	Gly	Gly	Gly	Gly	Cys	Gly	His	Pro	Ser	Phe	Asn	Gln	Met
65					70				75					80	
Leu	Asp	Val	Lys	Gly	Pro	Ile	Pro	Val	Lys	Arg	Gly	Gly	Gln	Ala	Leu
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Phe	Val	Leu	Leu												
			100												

&lt;210&gt; 3761

&lt;211&gt; 458

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3761

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 <213> Homo sapiens

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 <213> Homo sapiens

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 <212> PRT  
 <213> Homo sapiens

<400> 3764

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Ser	Pro	Arg	Cys	Ala	Ala	Thr	Met	Ala	Ser	Ser	Asp	Glu	Asp	Gly	Thr	35	40	45	
Asn	Gly	Gly	Ala	Ser	Glu	Ala	Gly	Glu	Asp	Arg	Glu	Ala	Pro	Gly	Lys	50	55	60	
Arg	Arg	Arg	Leu	Gly	Phe	Leu	Ala	Thr	Ala	Trp	Leu	Thr	Phe	Tyr	Asp	65	70	75	80
Ile	Ala	Met	Thr	Ala	Gly	Trp	Leu	Val	Leu	Ala	Ile	Ala	Met	Val	Arg	85	90	95	
Phe	Tyr	Met	Glu	Lys	Gly	Thr	His	Arg	Gly	Leu	Tyr	Lys	Ser	Ile	Gln	100	105	110	
Lys	Thr	Leu	Lys	Phe	Phe	Gln	Thr	Phe	Ala	Leu	Leu	Glu	Ile	Val	His	115	120	125	
Cys	Leu	Ile	Gly	Ile	Val	Pro	Thr	Ser	Val	Ile	Val	Thr	Gly	Val	Gln	130	135	140	
Val	Ser	Ser	Arg	Ile	Phe	Met	Val	Trp	Leu	Ile	Thr	His	Ser	Ile	Lys	145	150	155	160
Pro	Ile	Gln	Asn	Glu	Glu	Ser	Val	Val	Leu	Phe	Leu	Val	Ala	Trp	Thr	165	170	175	
Val	Thr	Glu	Ile	Thr	Arg	Tyr	Ser	Phe	Tyr	Thr	Phe	Ser	Leu	Leu	Asp	180	185	190	
His	Leu	Pro	Tyr	Phe	Ile	Lys	Trp	Ala	Arg	Tyr	Asn	Phe	Phe	Ile	Ile	195	200	205	
Leu	Tyr	Pro	Val	Gly	Val	Ala	Gly	Glu	Leu	Leu	Thr	Ile	Tyr	Ala	Ala	210	215	220	
Leu	Pro	Tyr	Val	Lys	Lys	Thr	Gly	Met	Phe	Ser	Ile	Arg	Leu	Pro	Asn	225	230	235	240
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<210> 3765
<211> 2764
<212> DNA
<213> Homo sapiens
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&lt;210&gt; 3766

<211> 464  
 <212> PRT  
 <213> Homo sapiens

<400> 3766

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Leu	Ala	Lys	Gln	Leu	Pro	Ala	His	Asp	Gln	Asp	Pro	Ser	Lys	Cys	His
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Glu	Leu	Ser	Pro	Arg	Glu	Val	Lys	Glu	Met	Glu	Gln	Phe	Val	Lys	Lys
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Met	Asp	Ala	Gln	Gly	Pro	Lys	Gln	Met	Asn	Ile	Pro	Gly	Gly	Asp	Arg
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Lys	Arg	Thr	Gln	Tyr	Ser	Cys	Tyr	Cys	Cys	Lys	Leu	Ser	Met	Lys	Glu
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His	Pro	Ala	Cys	Phe	Val	Cys	Ser	Thr	Cys	His	Glu	Leu	Leu	Val	Asp
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Met	Ile	Tyr	Phe	Trp	Lys	Asn	Glu	Lys	Leu	Tyr	Cys	Gly	Arg	His	Tyr
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Cys	Asp	Ser	Glu	Lys	Pro	Arg	Cys	Ala	Gly	Cys	Asp	Glu	Leu	Ile	Phe
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Ser	Asn	Glu	Tyr	Thr	Gln	Ala	Glu	Asn	Gln	Asn	Trp	His	Leu	Lys	His
		355					360					365			
Phe	Cys	Cys	Phe	Asp	Cys	Asp	Ser	Ile	Leu	Ala	Gly	Glu	Ile	Tyr	Val
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&lt;210&gt; 3767

&lt;211&gt; 2439

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3767

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&lt;210&gt; 3768

&lt;211&gt; 379

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3768

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Thr	Thr	Asp	Ser	Leu	Gln	Leu	Trp	Phe	Val	Arg	Leu	Ala	Leu	Leu	Val	
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Lys	Leu	Gly	Leu	Phe	Gln	Asn	Ala	Glu	Met	Glu	Phe	Glu	Pro	Phe	Gly	
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Tyr	Ser	Met	Ala	Asn	Cys	Leu	Leu	Leu	Met	Lys	Asp	Tyr	Val	Leu	Ala	
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Leu	His	Leu	Gly	Gln	Asn	Asn	Phe	Ala	Glu	Ala	His	Arg	Phe	Phe	Thr	
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Glu	Ile	Leu	Arg	Met	Asp	Pro	Arg	Asn	Ala	Val	Ala	Asn	Asn	Asn	Ala	
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Ala	Val	Cys	Leu	Leu	Tyr	Leu	Gly	Lys	Leu	Lys	Asp	Ser	Leu	Arg	Gln	
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Val	Leu	Phe	Asn	Leu	Thr	Thr	Met	Tyr	Glu	Leu	Glu	Ser	Ser	Arg	Ser	
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Met	Gln	Lys	Lys	Gln	Ala	Leu	Leu	Glu	Ala	Val	Ala	Gly	Lys	Glu	Gly	
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<210> 3769
<211> 1931
<212> DNA
<213> Homo sapiens
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 1931

&lt;210&gt; 3770

&lt;211&gt; 447

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3770

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Val	Lys	Thr	Asp	Trp	Asn	Glu	Glu	Cys	Lys	Ser	Pro	Lys	Lys	Gly	Arg	35	40	45	
Cys	Ser	Gly	His	Asn	His	Val	Pro	Asn	Ser	Leu	Ser	Tyr	Ala	Arg	Asp	50	55	60	
Glu	Leu	Thr	Gln	Ser	Phe	His	Arg	Leu	Ser	Val	Cys	Val	Tyr	Gly	Asn	65	70	75	80
Asn	Leu	His	Gly	Asn	Ser	Glu	Val	Asn	Leu	His	Gly	Cys	Arg	Asp	Leu	85	90	95	
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Ser	Gly	Asp	Ser	Gly	Ser	Asp	Tyr	Leu	Phe	Pro	Glu	Ala	Ser	Glu	Glu	115	120	125	
Ser	Ala	Gly	Ile	Pro	Gly	Lys	Ser	Glu	Leu	Pro	Tyr	Glu	Glu	Leu	Trp	130	135	140	
Leu	Glu	Glu	Gly	Lys	Pro	Ser	His	Gln	Pro	Leu	Thr	Arg	Ser	Leu	Ser	145	150	155	160
Glu	Lys	Asn	Arg	Cys	Asp	Gln	Phe	Arg	Gly	Ser	Val	Arg	Ser	Lys	Cys	165	170	175	
Ala	Thr	Ser	Pro	Leu	Pro	Ile	Pro	Gly	Thr	Leu	Gly	Ala	Ala	Val	Lys	180	185	190	
Ser	Ser	Asp	Thr	Ala	Leu	Pro	Pro	Pro	Pro	Val	Pro	Pro	Lys	Ser	Glu	195	200	205	
Ala	Val	Arg	Glu	Glu	Cys	Arg	Leu	Leu	Asn	Ala	Pro	Pro	Val	Pro	Pro	210	215	220	
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Val	Lys	Pro	Ala	Arg	Gln	Gln	Thr	Arg	Ser	Pro	Ser	Pro	Thr	Leu	Ser	245	250	255	
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Pro	Ser	Glu	Ser	Thr	Pro	Val	Ser	Cys	Tyr	Pro	Cys	Asn	Arg	Val	Lys	275	280	285	
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Ser Tyr Pro Arg Gln Lys Thr Pro Gly Thr Pro Lys Arg Asn Cys Pro		335
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	370	375
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&lt;210&gt; 3771

&lt;211&gt; 1514

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3771

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&lt;210&gt; 3772

&lt;211&gt; 280

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3772

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Thr	Leu	Gln	His	Trp	Pro	His	Ile	Ile	Arg	Ile	Gly	Asp	Leu	Lys	Pro
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&lt;211&gt; 2664

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3773

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&lt;211&gt; 549

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3775

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Thr	Glu	Lys	Thr	Glu	Asp	Ser	Ser	Val	Pro	Glu	Thr	Pro	Asp	Asn	Glu
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Ile	Asp	Leu	Ser	Ser	Asp	Ser	Glu	Asp	Val	Val	Ser	Pro	Asn	Cys	Ser
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Asn	Thr	Val	Gln	Glu	Lys	Thr	Phe	Asn	Lys	Asp	Thr	Val	Ile	Ile	Val
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Lys Pro Phe Ile Leu Arg Arg Val Lys Glu Glu Val Leu Lys Gln Leu				
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Pro Pro Lys Lys Asp Arg Ile Glu Leu Cys Ala Met Ser Glu Arg Gln				
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Glu Gln Leu Tyr Leu Gly Leu Phe Asn Arg Leu Lys Lys Ser Ile Asn				
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&lt;211&gt; 530

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3780

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370	375	380	
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385	390	395	400
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<210> 3784

<211> 804

<212> PRT

<213> Homo sapiens

<400> 3784

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Leu	Leu	Glu	Arg	Val	Glu	Glu	Pro	Val	Leu	Gln	Asn	Gln	Ile	Arg	Glu
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Leu	Ser	Arg	Ser	Val	Pro	Glu	Leu	Lys	Val	Gly	Ile	Val	Gly	Asn	Leu
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Ala	Ser	Gly	Lys	Ser	Ala	Leu	Val	His	Arg	Tyr	Leu	Thr	Gly	Thr	Tyr
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2931

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 <212> DNA  
 <213> Homo sapiens

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&lt;210&gt; 3786

&lt;211&gt; 168

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3786

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			20					25					30		
Thr	Glu	Met	Ser	Leu	His	Ala	Leu	Tyr	Met	His	Gln	Leu	His	Lys	Gln
		35					40				45				
Gln	Ala	Gln	Ala	Glu	Pro	Glu	Arg	His	Val	Trp	His	Arg	Arg	Glu	Ser
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Asp	Glu	Ser	Gly	Glu	Ser	Ala	Pro	Asp	Glu	Gly	Gly	Glu	Gly	Ala	Arg
65					70				75					80	
Ala	Pro	Gln	Ser	Ile	Pro	Arg	Ser	Ala	Ser	Tyr	Pro	Cys	Ala	Ala	Pro
			85					90					95		
Arg	Pro	Gly	Ala	Pro	Glu	Thr	Thr	Ala	Leu	His	Gly	Gly	Phe	Gln	Arg

			100					105					110				
Arg	Tyr	Gly	Gly	Ile	Thr	Asp	Pro	Gly	Thr	Val	Pro	Arg	Val	Pro	Ser		
		115						120					125				
His	Phe	Ser	Arg	Leu	Pro	Leu	Gly	Gly	Trp	Ala	Glu	Asp	Gly	Gln	Ser		
		130					135					140					
Ala	Ser	Arg	His	Pro	Glu	Pro	Val	Pro	Glu	Glu	Gly	Ser	Glu	Asp	Glu		
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Leu	Pro	Pro	Gln	Val	His	Lys	Val										
			165														

&lt;210&gt; 3787

&lt;211&gt; 717

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3787

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&lt;210&gt; 3788

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3788

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Cys	Ala	Ser	Ile	Lys	Leu	Arg	His	Gly	Ser	Arg	Ala	Ala	Pro	Pro	Gly		
		20						25					30				
Pro	Trp	Gly	Ala	Lys	Cys	Ser	Trp	Arg	Gln	Val	Ala	Lys	Gly	Glu	His		
	35						40					45					
Leu	Gly	Gln	Thr	Pro	Gly	Phe	Ser	Ser	Arg	Leu	Pro	His	Leu	Pro	Ala		



50		55		60	
Ser	Leu	Leu	Ser	Trp	Leu
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Ala	Ala	Val	Ile	Thr	His
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Ala	Val	Leu	Val	His	Met
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 <211> 4341  
 <212> DNA  
 <213> Homo sapiens

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 <212> PRT  
 <213> Homo sapiens

<400> 3790

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			20					25					30		
Leu	Gln	Val	Leu	Lys	Ala	Gln	Ser	Glu	Asp	Pro	Leu	Pro	Glu	Leu	His
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Glu	Asp	Leu	His	Asn	Glu	Lys	Glu	Leu	Ile	Lys	Glu	Leu	Glu	Gln	Ser
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65					70					75					80
Asp	Leu	Thr	Arg	His	Val	Leu	Val	Glu	Asp	Val	Met	Val	Leu	Lys	Glu
				85					90					95	
Gln	Ile	Glu	His	Leu	His	Arg	Gln	Trp	Glu	Asp	Leu	Cys	Leu	Arg	Val
			100					105					110		
Ala	Ile	Arg	Lys	Gln	Glu	Ile	Glu	Asp	Arg	Leu	Asn	Thr	Trp	Val	Val
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Lys	Leu	Gln	Lys	Asp	Cys	Met	Glu	Glu	Ile	Asn	Leu	Phe	Ser	Glu	Asn
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Lys	Leu	Gln	Leu	Lys	Gln	Met	Gly	Asp	Gln	Leu	Ile	Lys	Ala	Ser	Asn
		180						185					190		
Lys	Ser	Arg	Ala	Ala	Glu	Ile	Asp	Asp	Lys	Leu	Asn	Lys	Ile	Asn	Asp
	195						200					205			
Arg	Trp	Gln	His	Leu	Phe	Asp	Val	Ile	Gly	Ser	Arg	Val	Lys	Lys	Leu
	210					215						220			
Lys	Glu	Thr	Phe	Ala	Phe	Ile	Gln	Gln	Leu	Asp	Lys	Asn	Met	Ser	Asn
225				230						235					240
Leu	Arg	Thr	Trp	Leu	Ala	Arg	Ile	Glu	Ser	Glu	Leu	Ser	Lys	Pro	Val
			245						250					255	
Val	Tyr	Asp	Val	Cys	Asp	Asp	Gln	Glu	Ile	Gln	Lys	Arg	Leu	Ala	Glu
		260						265					270		
Gln	Gln	Asp	Leu	Gln	Arg	Asp	Ile	Glu	Gln	His	Ser	Ala	Gly	Val	Glu
		275					280					285			
Ser	Val	Phe	Asn	Ile	Cys	Asp	Val	Leu	Leu	His	Asp	Ser	Asp	Ala	Cys
	290					295					300				
Ala	Asn	Glu	Thr	Glu	Cys	Asp	Ser	Ile	Gln	Gln	Thr	Thr	Arg	Ser	Leu
305					310					315					320
Asp	Arg	Arg	Trp	Arg	Asn	Ile	Cys	Ala	Met	Ser	Met	Glu	Arg	Arg	Met
			325						330					335	
Lys	Ile	Glu	Glu	Thr	Trp	Arg	Leu	Trp	Gln	Lys	Phe	Leu	Asp	Asp	Tyr
		340						345					350		
Ser	Arg	Phe	Glu	Asp	Trp	Leu	Lys	Ser	Ala	Glu	Arg	Thr	Ala	Ala	Cys
	355						360					365			
Pro	Asn	Ser	Ser	Glu	Val	Leu	Tyr	Thr	Ser	Ala	Lys	Glu	Glu	Leu	Lys

370	375	380
Arg Phe Glu Ala Phe Gln Arg Gln Ile His Glu Arg Leu Thr Gln Leu		
385	390	395
Glu Leu Ile Asn Lys Gln Tyr Arg Arg Leu Ala Arg Glu Asn Arg Thr		400
	405	410
Asp Thr Ala Ser Arg Leu Lys Gln Met Val His Glu Gly Asn Gln Arg		415
	420	425
Trp Asp Asn Leu Gln Arg Arg Val Thr Ala Val Leu Arg Arg Leu Arg		430
	435	440
His Phe Thr Asn Gln Arg Glu Glu Phe Glu Gly Thr Arg Glu Ser Ile		445
	450	455
Leu Val Trp Leu Thr Glu Met Asp Leu Gln Leu Thr Asn Val Glu His		460
465	470	475
Phe Ser Glu Ser Asp Ala Asp Asp Lys Met Arg Gln Leu Asn Gly Phe		480
	485	490
Gln Gln Glu Ile Thr Leu Asn Thr Asn Lys Ile Asp Gln Leu Ile Val		495
	500	505
Phe Gly Glu Gln Leu Ile Gln Lys Ser Glu Pro Leu Asp Ala Val Leu		510
	515	520
Ile Glu Asp Glu Leu Glu Glu Leu His Arg Tyr Cys Gln Glu Val Phe		525
	530	535
Gly Arg Val Ser Arg Phe His Arg Arg Leu Thr Ser Cys Thr Pro Gly		540
545	550	555
Leu Glu Asp Glu Lys Glu Ala Ser Glu Asn Glu Thr Asp Met Glu Asp		560
	565	570
Pro Arg Glu Ile Gln Thr Asp Ser Trp Arg Lys Arg Gly Glu Ser Glu		575
	580	585
Glu Pro Ser Ser Pro Gln Ser Leu Cys His Leu Val Ala Pro Gly His		590
	595	600
Glu Arg Ser Gly Cys Glu Thr Pro Val Ser Val Asp Ser Ile Pro Leu		605
	610	615
Glu Trp Asp His Thr Gly Asp Val Gly Gly Ser Ser Ser His Glu Glu		620
625	630	635
Asp Glu Glu Gly Pro Tyr Tyr Ser Ala Leu Ser Gly Lys Ser Ile Ser		640
	645	650
Asp Gly His Ser Trp His Val Pro Asp Ser Pro Ser Cys Pro Glu His		655
	660	665
His Tyr Lys Gln Met Glu Gly Asp Arg Asn Val Pro Pro Val Pro Pro		670
	675	680
Ala Ser Ser Thr Pro Tyr Lys Pro Pro Tyr Gly Lys Leu Leu Leu Pro		685
	690	695
Pro Gly Thr Asp Gly Gly Lys Glu Gly Pro Arg Val Leu Asn Gly Asn		700
705	710	715
Pro Gln Gln Glu Asp Gly Gly Leu Ala Gly Ile Thr Glu Gln Gln Ser		720
	725	730
Gly Ala Phe Asp Arg Trp Glu Met Ile Gln Ala Gln Glu Leu His Asn		735
	740	745
Lys Leu Lys Ile Lys Gln Asn Leu Gln Gln Leu Asn Ser Asp Ile Ser		750
	755	760
Ala Ile Thr Thr Trp Leu Lys Lys Thr Glu Ala Glu Leu Glu Met Leu		765
	770	775
Lys Met Ala Lys Pro Pro Ser Asp Ile Gln Glu Ile Glu Leu Arg Val		780
785	790	795
Lys Arg Leu Gln Glu Ile Leu Lys Ala Phe Asp Thr Tyr Lys Ala Leu		800

				805					810				815				
Val	Val	Ser	Val	Asn	Val	Ser	Ser	Lys	Glu	Phe	Leu	Gln	Thr	Glu	Ser		
			820					825					830				
Pro	Glu	Ser	Thr	Glu	Leu	Gln	Ser	Arg	Leu	Arg	Gln	Leu	Ser	Leu	Leu		
		835					840					845					
Trp	Glu	Ala	Ala	Gln	Gly	Ala	Val	Asp	Ser	Trp	Arg	Gly	Gly	Leu	Arg		
	850					855					860						
Gln	Ser	Leu	Met	Gln	Cys	Gln	Asp	Phe	His	Gln	Leu	Ser	Gln	Asn	Leu		
865				870						875				880			
Leu	Leu	Trp	Leu	Ala	Ser	Ala	Lys	Asn	Arg	Arg	Gln	Lys	Ala	His	Val		
			885					890						895			
Thr	Asp	Pro	Lys	Ala	Asp	Pro	Arg	Ala	Leu	Leu	Glu	Cys	Arg	Arg	Glu		
		900					905						910				
Leu	Met	Gln	Leu	Glu	Lys	Glu	Leu	Val	Glu	Arg	Gln	Pro	Gln	Val	Asp		
	915					920					925						
Met	Leu	Gln	Glu	Ile	Ser	Asn	Ser	Leu	Leu	Ile	Lys	Gly	His	Gly	Glu		
	930				935						940						
Asp	Cys	Ile	Glu	Ala	Glu	Glu	Lys	Val	His	Val	Ile	Glu	Lys	Lys	Leu		
945				950				955						960			
Lys	Gln	Leu	Arg	Glu	Gln	Val	Ser	Gln	Asp	Leu	Met	Ala	Leu	Gln	Gly		
			965					970						975			
Thr	Gln	Asn	Pro	Ala	Ser	Pro	Leu	Pro	Ser	Phe	Asp	Glu	Val	Asp	Ser		
		980					985						990				
Gly	Asp	Gln	Pro	Pro	Ala	Thr	Ser	Val	Pro	Ala	Pro	Arg	Ala	Lys	Gln		
	995						1000					1005					
Phe	Arg	Ala	Val	Arg	Thr	Thr	Glu	Gly	Glu	Glu	Glu	Thr	Glu	Ser	Arg		
	1010				1015						1020						
Val	Pro	Gly	Ser	Thr	Arg	Pro	Gln	Arg	Ser	Phe	Leu	Ser	Arg	Val	Val		
1025				1030				1035						1040			
Arg	Ala	Ala	Leu	Pro	Leu	Gln	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Leu		
			1045				1050						1055				
Ala	Cys	Leu	Leu	Pro	Ser	Ser	Glu	Glu	Asp	Tyr	Ser	Cys	Thr	Gln	Ala		
		1060					1065					1070					
Asn	Asn	Phe	Ala	Arg	Ser	Phe	Tyr	Pro	Met	Leu	Arg	Tyr	Thr	Asn	Gly		
	1075						1080					1085					
Pro	Pro	Pro	Thr														
	1090																

&lt;210&gt; 3791

&lt;211&gt; 1011

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3791

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120

tgaaccttct ttaaacattt agcctcttcc tctcctget tttcccgagc ttccggttcc  
180

tcttctcct tccggcaagc aacttctca ggtgactctg ccctttgatc cattggaata  
240

tctgtccca gagacatagc aattgctctc atcatctggt cctcttcaga catgctgaga  
300

tcccgaacaa ctcctcccat gattggagga ggggtgggtta aaaggtactc tgtggcctgc  
 360  
 tccatgggtgc tgggtgttcaa cagtgcctcc attgcatgtt cccttgtgaa gcccattgtcc  
 420  
 atgagctgtt gcagttgttg ctgggtgact tgaggttccc ggcgggagcc accttcctct  
 480  
 tgccctgtat cctcttctcc tcgagacccc tccttctect tgcttagtct ctctcgaatc  
 540  
 acaggttctc ctccggaggat gtggcataga atggccagca tcgattcagc cattcgtcca  
 600  
 ccatatacct tcagggggtt cgggttccat aagtttttga tgcaagtaaa ggctgctttc  
 660  
 tgagttacca caaggaagcg cagtgcactg aactggggaa agttctggac acctccaggc  
 720  
 aatttggcag gcagcgaatg tggagattca agcaccgtgg tgggattcac catcttctcc  
 780  
 accagcataa gccaggcatc taggaattct cctgtgccat caggcaagtc tgagtgttcc  
 840  
 aatccctcag aaacaggaac tttacctccc atggacagag ccagttgaa agtttcaaaa  
 900  
 agagcattgt ggcctccgga gcagagaaat ttttgcagca tgaggtggta gggatacttc  
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 1011

&lt;210&gt; 3792

&lt;211&gt; 288

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3792

Met	Leu	Phe	Asp	Glu	Arg	Lys	Tyr	Pro	Tyr	His	Leu	Met	Leu	Gln	Lys
1				5				10						15	
Phe	Leu	Cys	Ser	Gly	Gly	His	Asn	Ala	Leu	Phe	Glu	Thr	Phe	Asn	Trp
			20					25					30		
Ala	Leu	Ser	Met	Gly	Gly	Lys	Val	Pro	Val	Ser	Glu	Gly	Leu	Glu	His
		35				40					45				
Ser	Asp	Leu	Pro	Asp	Gly	Thr	Gly	Glu	Phe	Leu	Asp	Ala	Trp	Leu	Met
50					55					60					
Leu	Val	Glu	Lys	Met	Val	Asn	Pro	Thr	Thr	Val	Leu	Glu	Ser	Pro	His
65				70				75						80	
Ser	Leu	Pro	Ala	Lys	Leu	Pro	Gly	Gly	Val	Gln	Asn	Phe	Pro	Gln	Phe
			85					90					95		
Ser	Ala	Leu	Arg	Phe	Leu	Val	Val	Thr	Gln	Lys	Ala	Ala	Phe	Thr	Cys
		100					105					110			
Ile	Lys	Asn	Leu	Trp	Asn	Arg	Lys	Pro	Leu	Lys	Val	Tyr	Gly	Gly	Arg
	115				120						125				
Met	Ala	Glu	Ser	Met	Leu	Ala	Ile	Leu	Cys	His	Ile	Leu	Arg	Gly	Glu
130				135				140							
Pro	Val	Ile	Arg	Glu	Arg	Leu	Ser	Lys	Glu	Lys	Glu	Gly	Ser	Arg	Gly
145			150					155					160		
Glu	Glu	Asp	Thr	Gly	Gln	Glu	Glu	Gly	Gly	Ser	Arg	Arg	Glu	Pro	Gln
		165					170					175			
Val	Asn	Gln	Gln	Gln	Leu	Gln	Gln	Leu	Met	Asp	Met	Gly	Phe	Thr	Arg



2942



&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3795

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cgcaactaca ggtctcatcc caccatcctg gacattccta accagctcta ttatgaaggg  
120  
gagctgcagg cctgtgctga tgtcgtggat cgagaacgct tctgccgctg ggcgggccta  
180  
cctcgacagg gctttcccat catctttcac ggcgtaatgg gcaaagatga gcgtgaaggc  
240  
aacagcccat ctttcttcaa ccctgaagag gctgccacag tgacttcta cctgaagctg  
300  
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360  
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420  
gagcttcgag gactggatga catcaaggac ttgaagggtg gttcagtaga agaattccaa  
480  
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660  
gactggaaag tattcctgga gttctgtaaa gaaaacggag ggtataccgg gtgtcccttc  
720  
cctgccaaac tggacctgca acagggacag aatttactgc aagggtctgag caagctcagc  
780  
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840  
ggcctgtctc tgcaagtgga gccagagtgg aggaatgagc tctgaagaca cagcacccag  
900  
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960  
ctgcccctcc aaggacagg aaggctgggg gagggagttt acaaccaag ccattccacc  
1020  
ccctccccctg ctggggagaa tgacacatca agctgctaac aattggggga aggggaagga  
1080  
agaaaactct gaaaacaaaa tcttgttcta tgcaaaagcc ttgataatgt ctctctgcc  
1140  
tggccccagc ttctgagcc cctaagctga ccctgtaggg aagggtggga ctttcagccc  
1200  
tgctgagggt cccatcccct tccagtggga gaggaacca gccccacac tcgggggagg  
1260  
aaaccagtg ggaggtggca gggaagccac ccacagggtt ctaagtttag ccccctgcta  
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1341

&lt;210&gt; 3796

&lt;211&gt; 294

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3796

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Asn Cys Leu Tyr Lys Lys Gly Pro Asp Gly Tyr Asp Pro Gln Phe Ile
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Thr Lys Leu Leu Arg Asn Tyr Arg Ser His Pro Thr Ile Leu Asp Ile
          20           25           30
Pro Asn Gln Leu Tyr Tyr Glu Gly Glu Leu Gln Ala Cys Ala Asp Val
          35           40           45
Val Asp Arg Glu Arg Phe Cys Arg Trp Ala Gly Leu Pro Arg Gln Gly
          50           55           60
Phe Pro Ile Ile Phe His Gly Val Met Gly Lys Asp Glu Arg Glu Gly
65           70           75           80
Asn Ser Pro Ser Phe Phe Asn Pro Glu Glu Ala Ala Thr Val Thr Ser
          85           90           95
Tyr Leu Lys Leu Leu Leu Ala Pro Ser Ser Lys Lys Gly Lys Ala Arg
          100          105          110
Leu Ser Pro Arg Ser Val Gly Val Ile Ser Pro Tyr Arg Lys Gln Val
          115          120          125
Glu Lys Ile Arg Tyr Cys Ile Thr Lys Leu Asp Arg Glu Leu Arg Gly
          130          135          140
Leu Asp Asp Ile Lys Asp Leu Lys Val Gly Ser Val Glu Glu Phe Gln
145          150          155          160
Gly Gln Glu Arg Ser Val Ile Leu Ile Ser Thr Val Arg Ser Ser Gln
          165          170          175
Ser Phe Val Gln Leu Asp Leu Asp Phe Asn Leu Gly Phe Leu Lys Asn
          180          185          190
Pro Lys Arg Phe Asn Val Ala Val Thr Arg Ala Lys Ala Leu Leu Ile
          195          200          205
Ile Val Gly Asn Pro Leu Leu Leu Gly His Asp Pro Asp Trp Lys Val
          210          215          220
Phe Leu Glu Phe Cys Lys Glu Asn Gly Gly Tyr Thr Gly Cys Pro Phe
225          230          235          240
Pro Ala Lys Leu Asp Leu Gln Gln Gly Gln Asn Leu Leu Gln Gly Leu
          245          250          255
Ser Lys Leu Ser Pro Ser Thr Ser Gly Pro His Ser His Asp Tyr Leu
          260          265          270
Pro Gln Glu Arg Glu Gly Glu Gly Gly Leu Ser Leu Gln Val Glu Pro
          275          280          285
Glu Trp Arg Asn Glu Leu
          290

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&lt;210&gt; 3797

&lt;211&gt; 1970

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3797

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ctccgctggc ggctgccgct cacctgctg ctctgcagg tgattatggt gattctcttc
120
ggggtgttcg tgcgctacga cttcgaggcc gacgcccact ggtggtcaga gaggacgcac
180

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300  
agcgccgtgg gcttcaactt cctgttggca gccttcggca tccagtgggc gctgctcatg  
360  
cagggctggg tccacttctt acaagaccgc tacatcgctg tgggcgtgga gaacctcatc  
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1140  
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1200  
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1380  
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1680  
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1740  
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1800

agacaactta gctgccagtc accacctatg aggcctcttct accccgtgcc tgcacctcgg  
 1860  
 ccagcatctc ctatgctccc tgggtccccc agacctctct gtgttggtgtg cgtggcagcc  
 1920  
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 1970

<210> 3798  
 <211> 473  
 <212> PRT  
 <213> Homo sapiens

<400> 3798  
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 Val Ile Leu Phe Gly Val Phe Val Arg Tyr Asp Phe Glu Ala Asp Ala  
 20 25 30  
 His Trp Trp Ser Glu Arg Thr His Lys Asn Leu Ser Asp Met Glu Asn  
 35 40 45  
 Glu Phe Tyr Tyr Arg Tyr Pro Ser Phe Gln Asp Val His Val Met Val  
 50 55 60  
 Phe Val Gly Phe Gly Phe Leu Met Thr Phe Leu Gln Arg Tyr Gly Phe  
 65 70 75 80  
 Ser Ala Val Gly Phe Asn Phe Leu Leu Ala Ala Phe Gly Ile Gln Trp  
 85 90 95  
 Ala Leu Leu Met Gln Gly Trp Phe His Phe Leu Gln Asp Arg Tyr Ile  
 100 105 110  
 Val Val Gly Val Glu Asn Leu Ile Asn Ala Asp Phe Cys Val Ala Ser  
 115 120 125  
 Val Cys Val Ala Phe Gly Ala Val Leu Gly Lys Val Ser Pro Ile Gln  
 130 135 140  
 Leu Leu Ile Met Thr Phe Phe Gln Val Thr Leu Phe Ala Val Asn Glu  
 145 150 155 160  
 Phe Ile Leu Leu Asn Leu Leu Lys Val Lys Asp Ala Gly Gly Ser Met  
 165 170 175  
 Thr Ile His Thr Phe Gly Ala Tyr Phe Gly Leu Thr Val Thr Arg Ile  
 180 185 190  
 Leu Tyr Arg Arg Asn Leu Glu Gln Ser Lys Glu Arg Gln Asn Ser Val  
 195 200 205  
 Tyr Gln Ser Asp Leu Phe Ala Met Ile Gly Thr Leu Phe Leu Trp Met  
 210 215 220  
 Tyr Trp Pro Ser Phe Asn Ser Ala Ile Ser Tyr His Gly Asp Ser Gln  
 225 230 235 240  
 His Arg Ala Ala Ile Asn Thr Tyr Cys Ser Leu Ala Ala Cys Val Leu  
 245 250 255  
 Thr Ser Val Ala Ile Ser Ser Ala Leu His Lys Lys Gly Lys Leu Asp  
 260 265 270  
 Met Val His Ile Gln Asn Ala Thr Leu Ala Gly Gly Val Ala Val Gly  
 275 280 285  
 Thr Ala Ala Glu Met Met Leu Met Pro Tyr Gly Ala Leu Ile Ile Gly  
 290 295 300  
 Phe Val Cys Gly Ile Ile Ser Thr Leu Gly Phe Val Tyr Leu Thr Pro  
 305 310 315 320  
 Phe Leu Glu Ser Arg Leu His Ile Gln Asp Thr Cys Gly Ile Asn Asn

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Leu	His	Gly	Ile	Pro	Gly	Ile	Ile	Gly	Gly	Ile	Val	Gly	Ala	Val	Thr				
			340					345					350						
Ala	Ala	Ser	Ala	Ser	Leu	Glu	Val	Tyr	Gly	Lys	Glu	Gly	Leu	Val	His				
		355					360					365							
Ser	Phe	Asp	Phe	Gln	Gly	Phe	Asn	Gly	Asp	Trp	Thr	Ala	Arg	Thr	Gln				
	370					375					380								
Gly	Lys	Phe	Gln	Ile	Tyr	Gly	Leu	Leu	Val	Thr	Leu	Ala	Met	Ala	Leu				
385					390				395						400				
Met	Gly	Gly	Ile	Ile	Val	Gly	Leu	Ile	Leu	Arg	Leu	Pro	Phe	Trp	Gly				
			405				410						415						
Gln	Pro	Ser	Asp	Glu	Asn	Cys	Phe	Glu	Asp	Ala	Val	Tyr	Trp	Glu	Met				
		420					425						430						
Pro	Glu	Gly	Asn	Ser	Thr	Val	Tyr	Ile	Pro	Glu	Asp	Pro	Thr	Phe	Lys				
	435					440						445							
Pro	Ser	Gly	Pro	Ser	Val	Pro	Ser	Val	Pro	Met	Val	Ser	Pro	Leu	Pro				
	450				455						460								
Met	Ala	Ser	Ser	Val	Pro	Leu	Val	Pro											
465					470														

&lt;210&gt; 3799

&lt;211&gt; 210

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3799

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60agcaagcaga aggcccggag gagaacaaga tccagctcct cctcctcttc ttccagttct  
120tctagctcct cttcttcttc ctcgtctctc tcctcttctc ccagtgatgg ccggaagaag  
180cgggggaagt acaaggacaa gaggaggaag  
210

&lt;210&gt; 3800

&lt;211&gt; 70

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3800

Ser Arg Asn Cys Ser Ala Ser Thr Ser Gln Ala Ser Pro Ser Pro Cys  
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&lt;210&gt; 3801

&lt;211&gt; 4070

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3801

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&lt;210&gt; 3802

&lt;211&gt; 476

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3802

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			20					25					30		
Leu	Trp	Thr	Ala	Ile	Thr	Leu	Phe	Ile	Phe	Leu	Val	Cys	Cys	Gln	Ile
		35					40					45			
Pro	Leu	Phe	Gly	Ile	Met	Ser	Ser	Asp	Ser	Ala	Asp	Pro	Phe	Tyr	Trp
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Met	Arg	Val	Ile	Leu	Ala	Ser	Asn	Arg	Gly	Thr	Leu	Met	Glu	Leu	Gly
65				70					75					80	
Ile	Ser	Pro	Ile	Val	Thr	Ser	Gly	Leu	Ile	Met	Gln	Leu	Leu	Ala	Gly
			85					90						95	
Ala	Lys	Ile	Ile	Glu	Val	Gly	Asp	Thr	Pro	Lys	Asp	Arg	Ala	Leu	Phe
			100					105					110		
Asn	Gly	Ala	Gln	Lys	Leu	Phe	Gly	Met	Ile	Ile	Thr	Ile	Gly	Gln	Ser

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Ile Val Tyr Val Met Thr Gly Met Tyr Gly Asp Pro Ser Glu Met Gly  
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Ala Gly Ile Cys Leu Leu Ile Ile Ile Gln Leu Phe Val Ala Gly Leu  
145 150 155 160  
Ile Val Leu Leu Leu Asp Glu Leu Leu Gln Lys Gly Tyr Gly Leu Gly  
165 170 175  
Ser Gly Ile Ser Leu Phe Ile Ala Thr Asn Ile Cys Glu Thr Ile Val  
180 185 190  
Trp Lys Ala Phe Ser Pro Thr Thr Ile Asn Thr Gly Arg Gly Thr Glu  
195 200 205  
Phe Glu Gly Ala Val Ile Ala Leu Phe His Leu Leu Ala Thr Arg Thr  
210 215 220  
Asp Lys Val Arg Ala Leu Arg Glu Ala Phe Tyr Arg Gln Asn Leu Pro  
225 230 235 240  
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245 250 255  
Tyr Phe Gln Gly Phe Arg Val Asp Leu Pro Ile Lys Ser Ala Arg Tyr  
260 265 270  
Arg Gly Gln Tyr Asn Thr Tyr Pro Ile Lys Leu Phe Tyr Thr Ser Asn  
275 280 285  
Ile Pro Ile Ile Leu Gln Ser Ala Leu Val Ser Asn Leu Tyr Val Ile  
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Pro Val Gly Gly Leu Cys Tyr Tyr Leu Ser Pro Pro Glu Ser Phe Gly  
340 345 350  
Ser Val Leu Glu Asp Pro Val His Ala Val Val Tyr Ile Val Phe Met  
355 360 365  
Leu Gly Ser Cys Ala Phe Phe Ser Lys Thr Trp Ile Glu Val Ser Gly  
370 375 380  
Ser Ser Ala Lys Asp Val Ala Lys Gln Leu Lys Glu Gln Gln Met Val  
385 390 395 400  
Met Arg Gly His Arg Glu Thr Ser Met Val His Glu Leu Asn Arg Tyr  
405 410 415  
Ile Pro Thr Ala Ala Ala Phe Gly Gly Leu Cys Ile Gly Ala Leu Ser  
420 425 430  
Val Leu Ala Asp Phe Leu Gly Ala Ile Gly Ser Gly Thr Gly Ile Leu  
435 440 445  
Leu Ala Val Thr Ile Ile Tyr Gln Tyr Phe Glu Ile Phe Val Lys Glu  
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<212> DNA  
<213> Homo sapiens

<400> 3803  
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<400> 3804  
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 Arg Met Ser His Ala Leu Glu Glu Ile Lys Lys Phe Leu Val Pro Asp  
 65 70 75 80  
 Tyr Asn Asp Glu Ile Arg Gln Glu Gln Leu Arg Glu Leu Ser Tyr Leu  
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&lt;210&gt; 3806

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 <212> PRT  
 <213> Homo sapiens

<400> 3806

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			20					25					30		
Pro	Leu	Arg	Phe	Trp	Leu	Val	Ile	Asn	Gln	Glu	Gly	Asn	Met	Val	Thr
		35					40						45		
Ala	Arg	Gln	Glu	Pro	Arg	Leu	Val	Leu	Ile	Ser	Leu	Thr	Cys	Asp	Gly
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65					70					75				80	
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			85						90					95	
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			100					105					110		
Thr	Ser	Phe	Leu	Lys	Ser	Gln	Pro	Tyr	Arg	Leu	Val	His	Phe	Glu	Pro
		115					120					125			
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Lys	Asp	Gln	Ile	Ala	Tyr	Ser	Asp	Thr	Ser	Pro	Phe	Leu	Ile	Leu	Ser
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		180					185						190		
Ala	Glu	Asp	Ser	Trp	Asp	Glu	Leu	Leu	Ile	Gly	Asp	Val	Glu	Leu	Lys
	195						200					205			
Arg	Val	Met	Ala	Cys	Ser	Arg	Cys	Ile	Leu	Thr	Thr	Val	Asp	Pro	Asp
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Arg	Gln	Cys	Asp	Pro	Ser	Glu	Arg	Lys	Leu	Tyr	Gly	Lys	Ser	Pro	Leu
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Phe	Gly	Gln	Tyr	Phe	Val	Leu	Glu	Asn	Pro	Gly	Thr	Ile	Lys	Val	Gly
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<210> 3807  
 <211> 372  
 <212> DNA  
 <213> Homo sapiens

<400> 3807

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 <211> 85  
 <212> PRT  
 <213> Homo sapiens

<400> 3808  
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 35 40 45  
 Ser Tyr His Pro Ala Pro Ser Gly Arg Gly Ser Ala Pro Ser Pro Arg  
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 <211> 1221  
 <212> DNA  
 <213> Homo sapiens

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&lt;210&gt; 3810

&lt;211&gt; 97

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3810

Ala	Gly	Ile	Leu	Arg	Pro	Glu	Ile	Glu	Pro	Asp	Cys	Ser	Ser	Pro	Lys
1				5					10					15	
Ser	Trp	Arg	Ala	Ser	Ser	Asn	Cys	Ser	Arg	Ala	Glu	Pro	Ile	Lys	Glu
			20					25					30		
Phe	Ser	Arg	Lys	Val	Gly	Arg	Pro	Pro	Thr	Pro	Ser	Arg	Arg	Val	Tyr
		35				40					45				
Arg	Gly	Thr	Arg	Thr	Arg	Pro	Ser	Thr	Ser	Ser	Pro	Trp	Ser	Leu	Ala
	50				55						60				
Arg	Val	Ala	Pro	Ala	Ser	Thr	Ala	Asn	Ser	Ser	Ser	Ser	Ser	Asp	Ala
65				70				75						80	
Trp	His	Arg	Ser	Ala	Thr	Thr	Arg	Gly	Pro	Asp	Pro	Thr	Trp	Glu	Leu
			85					90						95	

Arg

&lt;210&gt; 3811

&lt;211&gt; 296

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3811

ggtaccctgg agatgggagc cagggtcgg tcaactgattg tgccccccac tgcccagggt  
 60  
 cctgtcctta aggtcagaa ctgtagaccc tcaggcagac ccgttctccc ctaccagagg  
 120



acaccacgcc agatatctgg gcagcaggga catctgacct ggggtgcttg ctggcagcac  
180  
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296

<210> 3812

<211> 94

<212> PRT

<213> Homo sapiens

<400> 3812

Met	Gly	Ala	Arg	Ala	Arg	Ser	Leu	Ile	Val	Pro	Pro	Thr	Ala	Gln	Val
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Pro	Val	Leu	Lys	Ala	Gln	Asn	Cys	Arg	Pro	Ser	Gly	Arg	Pro	Val	Leu
			20					25					30		
Pro	Tyr	Gln	Arg	Thr	Pro	Arg	Gln	Ile	Ser	Gly	Gln	Gln	Gly	His	Leu
		35					40					45			
Thr	Trp	Gly	Ala	Cys	Trp	Gln	His	Cys	Leu	Asp	Ser	Arg	Ala	Ser	Leu
	50					55					60				
Gly	Pro	Pro	Pro	Asn	Pro	Ala	Arg	Glu	Arg	Leu	Lys	Ala	Cys	Pro	Pro
65				70						75				80	
Cys	Trp	Ala	Trp	Val	Gly	Arg	Ser	Gly	Thr	Gly	Pro	Ser	Arg		
				85						90					

<210> 3813

<211> 1419

<212> DNA

<213> Homo sapiens

<400> 3813

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120  
gactcactga gtgcccgcgc cacactgcac accttcgatc tgcttggtt cgggcgaagc  
180  
tcaaggccag cattcccaag ggaccggag ggggctgagg atgagtttgt gacatcgata  
240  
gagacatggc gggagaccat ggggatcccc agcatgatcc tcctggggca cagtttggga  
300  
ggattcctgg ccacttctta ctcaatcaag taccctgata gagttaaaca cctcatcctg  
360  
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420  
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480  
gtagctgggc cctggggggc tggctctggtg cagcgattcc ggccggactt caaacgcaag  
540  
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600  
aatcccagtg gtgagacagc attcaaagcc atgatggagt cctttggctg ggcccggcgc  
660

cctatgctgg agcgaattca cttgattcga aaagatgtgc ctatcactat gatctacggg  
 720  
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 780  
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 960  
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 1020  
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 1200  
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 1320  
 ttcaccccat cccataccag ttccatccag ggtctgctta actgccaaga gcaggtcctg  
 1380  
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 1419

&lt;210&gt; 3814

&lt;211&gt; 294

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3814

Arg	Ser	Lys	Trp	Trp	Ala	Pro	Ser	Glu	Met	Val	Thr	Val	Ser	Pro	Glu
1				5					10					15	
Gln	Asn	Asp	Arg	Thr	Pro	Leu	Val	Met	Val	His	Gly	Phe	Gly	Gly	Gly
			20					25					30		
Val	Gly	Leu	Trp	Ile	Leu	Asn	Met	Asp	Ser	Leu	Ser	Ala	Arg	Arg	Thr
		35				40						45			
Leu	His	Thr	Phe	Asp	Leu	Leu	Gly	Phe	Gly	Arg	Ser	Ser	Arg	Pro	Ala
	50					55				60					
Phe	Pro	Arg	Asp	Pro	Glu	Gly	Ala	Glu	Asp	Glu	Phe	Val	Thr	Ser	Ile
65					70				75					80	
Glu	Thr	Trp	Arg	Glu	Thr	Met	Gly	Ile	Pro	Ser	Met	Ile	Leu	Leu	Gly
			85						90				95		
His	Ser	Leu	Gly	Gly	Phe	Leu	Ala	Thr	Ser	Tyr	Ser	Ile	Lys	Tyr	Pro
			100					105					110		
Asp	Arg	Val	Lys	His	Leu	Ile	Leu	Val	Asp	Pro	Trp	Gly	Phe	Pro	Leu
		115				120						125			
Arg	Pro	Thr	Asn	Pro	Ser	Glu	Ile	Arg	Ala	Pro	Pro	Ala	Trp	Val	Lys
	130					135						140			
Ala	Val	Ala	Ser	Val	Leu	Gly	Arg	Ser	Asn	Pro	Leu	Ala	Val	Leu	Arg
145					150					155				160	
Val	Ala	Gly	Pro	Trp	Gly	Pro	Gly	Leu	Val	Gln	Arg	Phe	Arg	Pro	Asp

```
<210> 3815
<211> 3669
<212> DNA
<213> Homo sapiens
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2959

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1020  
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1080  
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1140  
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 3669

&lt;210&gt; 3816

&lt;211&gt; 707

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3816

Met	Gly	Asp	Glu	Arg	Pro	His	Tyr	Tyr	Gly	Lys	His	Gly	Thr	Pro	Gln
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Lys	Tyr	Asp	Pro	Thr	Phe	Lys	Gly	Pro	Ile	Tyr	Asn	Arg	Gly	Cys	Thr
			20					25					30		
Asp	Ile	Ile	Cys	Cys	Val	Phe	Leu	Leu	Leu	Ala	Ile	Val	Gly	Tyr	Val
		35					40					45			
Ala	Val	Gly	Ile	Ile	Ala	Trp	Thr	His	Gly	Asp	Pro	Arg	Lys	Val	Ile

50	55	60			
Tyr Pro Thr Asp Ser Arg Gly Glu Phe Cys Gly Gln Lys Gly Thr Lys					
65	70	75	80		
Asn Glu Asn Lys Pro Tyr Leu Phe Tyr Phe Asn Ile Val Lys Cys Ala					
	85	90	95		
Ser Pro Leu Val Leu Leu Glu Phe Gln Cys Pro Thr Pro Gln Ile Cys					
	100	105	110		
Val Glu Lys Cys Pro Asp Arg Tyr Leu Thr Tyr Leu Asn Ala Arg Ser					
	115	120	125		
Ser Arg Asp Phe Glu Tyr Tyr Lys Gln Phe Cys Val Pro Gly Phe Lys					
	130	135	140		
Asn Asn Lys Gly Val Ala Glu Val Leu Arg Asp Gly Asp Cys Pro Ala					
	145	150	155	160	
Val Leu Ile Pro Ser Lys Pro Leu Ala Arg Arg Cys Phe Pro Ala Ile					
	165	170	175		
His Ala Tyr Lys Gly Val Leu Met Val Gly Asn Glu Thr Thr Tyr Glu					
	180	185	190		
Asp Gly His Gly Ser Arg Lys Asn Ile Thr Asp Leu Val Glu Gly Ala					
	195	200	205		
Lys Lys Ala Asn Gly Val Leu Glu Ala Arg Gln Leu Ala Met Arg Ile					
	210	215	220		
Phe Glu Asp Tyr Thr Val Ser Trp Tyr Trp Ile Ile Ile Gly Leu Val					
	225	230	235	240	
Ile Ala Met Ala Met Ser Leu Leu Phe Ile Ile Leu Leu Arg Phe Leu					
	245	250	255		
Ala Gly Ile Met Val Trp Val Met Ile Ile Met Val Ile Leu Val Leu					
	260	265	270		
Gly Tyr Gly Ile Phe His Cys Tyr Met Glu Tyr Ser Arg Leu Arg Gly					
	275	280	285		
Glu Ala Gly Ser Asp Val Ser Leu Val Asp Leu Gly Phe Gln Thr Asp					
	290	295	300		
Phe Arg Val Tyr Leu His Leu Arg Gln Thr Trp Leu Ala Phe Met Ile					
	305	310	315	320	
Ile Leu Ser Ile Leu Glu Val Ile Ile Ile Leu Leu Leu Ile Phe Leu					
	325	330	335		
Arg Lys Arg Ile Leu Ile Ala Ile Ala Leu Ile Lys Glu Ala Ser Arg					
	340	345	350		
Ala Val Gly Tyr Val Met Cys Ser Leu Leu Tyr Pro Leu Val Thr Phe					
	355	360	365		
Phe Leu Leu Cys Leu Cys Ile Ala Tyr Trp Ala Ser Thr Ala Val Phe					
	370	375	380		
Leu Ser Thr Ser Asn Glu Ala Val Tyr Lys Ile Phe Asp Asp Ser Pro					
	385	390	395	400	
Cys Pro Xaa Tyr Cys Glu Asn Leu Xaa Asn Pro Glu Thr Phe Pro Ser					
	405	410	415		
Ser Asn Glu Ser Arg Gln Cys Pro Asn Ala Arg Cys Gln Phe Ala Phe					
	420	425	430		
Tyr Gly Gly Glu Ser Gly Tyr His Arg Ala Leu Leu Gly Leu Gln Ile					
	435	440	445		
Phe Asn Ala Phe Met Phe Phe Trp Leu Ala Asn Phe Val Leu Ala Leu					
	450	455	460		
Gly Gln Val Thr Leu Ala Gly Ala Phe Ala Ser Tyr Tyr Trp Ala Leu					
	465	470	475	480	
Arg Lys Pro Asp Asp Leu Pro Ala Phe Pro Leu Phe Ser Ala Phe Gly					



485 490 495  
 Arg Ala Leu Arg Tyr His Thr Gly Ser Leu Ala Phe Gly Ala Leu Ile  
 500 505 510  
 Leu Ala Ile Val Gln Ile Ile Arg Val Ile Leu Glu Tyr Leu Asp Gln  
 515 520 525  
 Arg Leu Lys Ala Ala Glu Asn Lys Phe Ala Lys Cys Leu Met Thr Cys  
 530 535 540  
 Leu Lys Cys Cys Phe Trp Cys Leu Glu Lys Phe Ile Lys Phe Leu Asn  
 545 550 555 560  
 Arg Asn Ala Tyr Ile Met Ile Ala Ile Tyr Gly Thr Asn Phe Cys Thr  
 565 570 575  
 Ser Ala Arg Asn Ala Phe Phe Leu Leu Met Arg Asn Ile Ile Arg Val  
 580 585 590  
 Ala Val Leu Asp Lys Val Thr Asp Phe Leu Phe Leu Leu Gly Lys Leu  
 595 600 605  
 Leu Ile Val Gly Ser Val Gly Ile Leu Ala Phe Phe Phe Phe Thr His  
 610 615 620  
 Arg Ile Arg Ile Val Gln Asp Thr Ala Pro Pro Leu Asn Tyr Tyr Trp  
 625 630 635 640  
 Val Pro Ile Leu Thr Val Ile Val Gly Ser Tyr Leu Ile Ala His Gly  
 645 650 655  
 Phe Phe Ser Val Tyr Gly Met Cys Val Asp Thr Leu Phe Leu Cys Phe  
 660 665 670  
 Leu Glu Asp Leu Glu Arg Asn Asp Gly Ser Ala Glu Arg Pro Tyr Phe  
 675 680 685  
 Met Ser Ser Thr Leu Lys Lys Leu Leu Asn Lys Thr Asn Lys Lys Ala  
 690 695 700  
 Ala Glu Ser  
 705

&lt;210&gt; 3817

&lt;211&gt; 419

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3817

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 419

&lt;210&gt; 3818

&lt;211&gt; 139

&lt;212&gt; PRT



<213> Homo sapiens

<400> 3818

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Ser Met Arg Tyr Leu Ala Leu Met Val Ser Arg Pro Val Leu Arg Leu
          20           25           30
Arg Glu Ile Asn Pro Leu Leu Phe Ser Tyr Val Glu Glu Leu Val Glu
          35           40           45
Ile Arg Lys Leu Arg Gln Asp Ile Leu Leu Met Lys Pro Tyr Phe Ile
          50           55           60
Thr Cys Arg Glu Ala Met Glu Ala Arg Leu Leu Leu Gln Asp Leu Leu
          65           70           75           80
Asp Val His Ala Gly Arg Leu Gly Cys Ser Leu Thr Glu Ile His Thr
          85           90           95
Leu Phe Ala Lys His Ile Lys Leu Asp Cys Glu Arg Cys Gln Ala Lys
          100          105          110
Gly Phe Val Cys Glu Leu Cys Arg Glu Gly Asp Val Leu Phe Pro Phe
          115          120          125
Asp Ser His Thr Ser Val Cys Ala Asp Cys Phe
          130          135

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<210> 3819

<211> 1731

<212> DNA

<213> Homo sapiens

<400> 3819

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420
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780

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<210> 3820

<211> 535

<212> PRT

<213> Homo sapiens

<400> 3820

Thr	Pro	Pro	Pro	Gly	Met	Phe	Ile	Cys	Leu	Glu	Pro	Trp	Ala	Ser
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Ile	Ser	Gln	Gly	Ser	Leu	Thr	Ser	Pro	Thr	Pro	Arg	Ala	Ser	Leu
		20						25					30	
Tyr	Phe	Phe	Thr	Asn	Cys	Ser	Ile	Ser	Phe	Thr	Ser	Leu	Gly	Asp
		35					40				45			
Ser	Trp	His	Phe	Glu	Gly	Ser	Trp	Ser	Cys	Ala	Gly	Ser	Cys	Phe
	50					55					60			
Ser	Cys	Phe	Phe	Arg	Tyr	Cys	Ala	Pro	Ser	Glu	Pro	Ala	Thr	Gly
65				70						75				80
Arg	Lys	Phe	Asp	Gly	Ala	Gly	Arg	Val	Ala	Val	Glu	Arg	Arg	Arg
			85						90				95	
Ser	Ser	Ala	Gly	Phe	Pro	Cys	Ser	Gln	Arg	Ser	Arg	Arg	Pro	Ala
		100						105					110	
Pro	Gly	Arg	Gly	Ile	Thr	Asp	Arg	Arg	Arg	Gly	Pro	Ile	Gly	Arg

2966

&lt;210&gt; 3821

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&lt;210&gt; 3824

&lt;211&gt; 342

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3824

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Ala	Ala	Ala	Ala	Ala	Ala	Pro	Pro	Pro	Pro	Ile	Glu	Glu	Glu	Cys	Pro
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&lt;211&gt; 2051

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3825

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&lt;211&gt; 125

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3826

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&lt;211&gt; 1245

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3827

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 Asp Glu Lys Val Asn Leu Leu Glu Leu Thr Trp Ala Leu Asp Asn Glu  
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 260 265 270  
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&lt;213&gt; Homo sapiens

&lt;400&gt; 3829

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 5640  
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 5700  
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 5713

&lt;210&gt; 3830

&lt;211&gt; 444

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3830

Phe	Lys	Glu	Phe	Leu	Asp	Leu	Leu	Gly	Asp	Thr	Ile	Thr	Leu	Gln	Asp
1				5				10						15	
Phe	Lys	Gly	Phe	Arg	Gly	Gly	Leu	Asp	Val	Thr	His	Gly	Gln	Thr	Gly
			20					25					30		
Val	Glu	Ser	Val	Tyr	Thr	Thr	Phe	Arg	Asp	Arg	Glu	Ile	Met	Phe	His



		35					40					45				
Val	Ser	Thr	Lys	Leu	Pro	Phe	Thr	Asp	Gly	Asp	Ala	Gln	Gln	Leu	Gln	
	50					55					60					
Arg	Lys	Arg	His	Ile	Gly	Asn	Asp	Ile	Val	Ala	Ile	Ile	Phe	Gln	Glu	
65					70					75					80	
Glu	Asn	Thr	Pro	Phe	Val	Pro	Asp	Met	Ile	Ala	Ser	Asn	Phe	Leu	His	
				85					90					95		
Ala	Tyr	Ile	Val	Val	Gln	Val	Glu	Thr	Pro	Gly	Thr	Glu	Thr	Pro	Ser	
			100					105					110			
Tyr	Lys	Val	Ser	Val	Thr	Ala	Arg	Glu	Asp	Val	Pro	Thr	Phe	Gly	Pro	
		115					120					125				
Pro	Leu	Pro	Ser	Pro	Pro	Val	Phe	Gln	Lys	Gly	Pro	Glu	Phe	Arg	Glu	
	130					135					140					
Phe	Leu	Leu	Thr	Lys	Leu	Thr	Asn	Ala	Glu	Asn	Ala	Cys	Cys	Lys	Ser	
145					150					155					160	
Asp	Lys	Phe	Ala	Lys	Leu	Glu	Asp	Arg	Thr	Arg	Ala	Ala	Leu	Leu	Asp	
				165					170					175		
Asn	Leu	His	Asp	Glu	Leu	His	Ala	His	Thr	Gln	Ala	Met	Leu	Gly	Leu	
			180					185					190			
Gly	Pro	Glu	Glu	Asp	Lys	Phe	Glu	Asn	Gly	Gly	His	Gly	Gly	Phe	Leu	
		195					200					205				
Glu	Ser	Phe	Lys	Arg	Ala	Ile	Arg	Val	Arg	Ser	His	Ser	Met	Glu	Thr	
	210					215					220					
Met	Val	Gly	Gly	Gln	Lys	Lys	Ser	His	Ser	Gly	Gly	Ile	Pro	Gly	Ser	
225					230					235					240	
Leu	Ser	Gly	Gly	Ile	Ser	His	Asn	Ser	Met	Glu	Val	Thr	Lys	Thr	Thr	
				245					250					255		
Phe	Ser	Pro	Pro	Val	Val	Ala	Ala	Thr	Val	Lys	Asn	Gln	Ser	Arg	Ser	
			260					265					270			
Pro	Ile	Lys	Arg	Arg	Ser	Gly	Leu	Phe	Pro	Arg	Leu	His	Thr	Gly	Ser	
		275					280					285				
Glu	Gly	Gln	Gly	Asp	Ser	Arg	Ala	Arg	Cys	Asp	Ser	Thr	Ser	Ser	Thr	
	290					295					300					
Pro	Lys	Thr	Pro	Asp	Gly	Gly	His	Ser	Ser	Gln	Glu	Ile	Lys	Ser	Glu	
305					310					315					320	
Thr	Ser	Ser	Asn	Pro	Ser	Ser	Pro	Glu	Ile	Cys	Pro	Asn	Lys	Glu	Lys	
			325						330					335		
Pro	Phe	Met	Lys	Leu	Lys	Glu	Asn	Gly	Arg	Ala	Ile	Ser	Arg	Ser	Ser	
			340					345					350			
Ser	Ser	Thr	Ser	Ser	Val	Ser	Ser	Thr	Ala	Gly	Glu	Gly	Glu	Ala	Met	
		355					360					365				
Glu	Glu	Gly	Asp	Ser	Gly	Gly	Ser	Gln	Pro	Ser	Thr	Thr	Ser	Pro	Phe	
	370					375						380				

<211> 726



&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3831

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 60  
 tgtgaacaat taagagagac ttgtggcaga agtagatttc tttggcattt gcacacagga  
 120  
 gtcagaaaca aatgatgtcc atagcatttg gctgggctaa cgtctaaagt cgtagctttt  
 180  
 agacgagtat gagttctcac tctgtgttac ctgctgagtc cctgagggca tgtgagttca  
 240  
 gtcctgaaac agaccactg nccgtgtcac agatcccagc ttcgctaagc tcagcttttag  
 300  
 catgttatgg tttatcgttt ctccagctcc attccacaaa ctctcatata gatagaatta  
 360  
 atttcagtgt aaaaatgggtg tcattctattc ttcagatacc taagttgtca tatctggggc  
 420  
 tgggagacat taaaaatatg gagcaaaaat actgcaacct gtgtatccaa cttttcatct  
 480  
 cttttcttct ccttacagtc cagacctttt agccctccca ttcattcttc cagccctcct  
 540  
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 600  
 agcgcagcca ccactcccac agttgagaat gaacagcctt ccctcgtttg ggttgacaga  
 660  
 ggaaagggtt atttgacttt tgaaggttct tccaggggac ccagccccct aaccatggga  
 720  
 gctcag  
 726

&lt;210&gt; 3832

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3832

Met	Ser	Ser	His	Ser	Val	Leu	Pro	Ala	Glu	Ser	Leu	Arg	Ala	Cys	Glu
1				5					10					15	
Phe	Ser	Pro	Glu	Thr	Asp	Pro	Leu	Xaa	Val	Ser	Gln	Ile	Pro	Ala	Ser
			20					25					30		
Leu	Ser	Ser	Ala	Leu	Ala	Cys	Tyr	Gly	Leu	Ser	Phe	Leu	Gln	Leu	His
		35				40					45				
Ser	Thr	Asn	Ser	His	Ile	Asp	Arg	Ile	Asn	Phe	Ser	Val	Lys	Met	Val
	50				55				60						
Ser	Ser	Ile	Leu	Gln	Ile	Pro	Lys	Leu	Ser	Tyr	Leu	Gly	Leu	Gly	Asp
65				70				75					80		
Ile	Lys	Asn	Met	Glu	Gln	Lys	Tyr	Cys	Asn	Leu	Cys	Ile	Gln	Leu	Phe
		85				90						95			
Ile	Ser	Phe	Leu	Leu	Leu	Thr	Val	Gln	Thr	Phe					
		100				105									

&lt;210&gt; 3833

&lt;211&gt; 1764

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3833

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120  
ggcaagatgc agctggtggc tgacctgctg ctgctgtcga gcgaggcgcg gcccgctgc  
180  
ttcgagggcc ccgcctctc tggtgccggc gccgagtcct tcgagcaggg ccgggacacc  
240  
atcatcgcg gcaccaagg gctctccatc ctcaccacg acgtgcagag ccagctcaac  
300  
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360  
ctgaccgagt gctcggccca cgcggcctat ctggccgctg tggccacgcc gggcgcccag  
420  
cccgcgcagc cgggcctggt ggaccgctac cgcgtgacgc gatgccgcca cgaggtggag  
480  
cagggttgcg ccgtgctgcg cgccacgccg ctggccgaca tgacgccgca gctgctgctg  
540  
gaggtgtcgc agggcctgtc gcgcaacctc aagttcctga cggacgcgtg cgccctggcc  
600  
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660  
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720  
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780  
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840  
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900  
ctgaccagc gcctcaggga tctggcgag caccgccgag ggggcgcca gatgtcggac  
960  
cacagggaga ggctgaggaa ctccgctgc gccgtgtctg aaggctgcac cctgctatct  
1020  
caggctttaa gggagaggtc ttgcgccagg actttaccgc cagtgaattc caattctgtg  
1080  
aattagcacc ccaccccat accccttctt ccaccccgag actaaaggaa gatacttact  
1140  
ctctgcccct ctccatttat accaaagaaa tcataggtga aacccctac cctccccaac  
1200  
gttaaagtgt cgagaggaat cttccacaag gcagggccat gcacgcaacc tgcacacgca  
1260  
cttgaggggc ccaggtgtct ctccaccagc ccccatgcag tagggactgg aagatatgtc  
1320  
atctgctggt tgtgttatca ctcccacccc ctacccagc ccgtcttccg gaatttctca  
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actaaatttc attattgggc aggaaggagg tcatgggttc atttcatttt tgtttttgt  
1440  
gtttttaatt aaaagaaagg ttacctcagt tttcactcct tagacatgga tgtagctacc  
1500

tttttttgta tgtctttttt ttttttaagc aatcgtgttg aattaggagt atacttggtg  
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 1620  
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 1680  
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 1740  
 aaaaaaagtt ttgccctgtc gacc  
 1764

&lt;210&gt; 3834

&lt;211&gt; 361

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3834

Ala	Ser	Gly	Ser	Ala	Gly	Lys	Pro	Thr	Gly	Glu	Ala	Ala	Ser	Pro	Ala	1	5	10	15
Pro	Ala	Ser	Ala	Gly	Gly	Gly	Ala	Ser	Ser	Gln	Pro	Arg	Lys	Lys	Leu	20	25	30	
Val	Ser	Val	Cys	Asp	His	Cys	Lys	Gly	Lys	Met	Gln	Leu	Val	Ala	Asp	35	40	45	
Leu	Leu	Leu	Leu	Ser	Ser	Glu	Ala	Arg	Pro	Val	Leu	Phe	Glu	Gly	Pro	50	55	60	
Ala	Ser	Ser	Gly	Ala	Gly	Ala	Glu	Ser	Phe	Glu	Gln	Gly	Arg	Asp	Thr	65	70	75	80
Ile	Ile	Ala	Arg	Thr	Lys	Gly	Leu	Ser	Ile	Leu	Thr	His	Asp	Val	Gln	85	90	95	
Ser	Gln	Leu	Asn	Met	Gly	Arg	Phe	Gly	Glu	Ala	Gly	Asp	Ser	Leu	Val	100	105	110	
Glu	Leu	Gly	Asp	Leu	Val	Val	Ser	Leu	Thr	Glu	Cys	Ser	Ala	His	Ala	115	120	125	
Ala	Tyr	Leu	Ala	Ala	Val	Ala	Thr	Pro	Gly	Ala	Gln	Pro	Ala	Gln	Pro	130	135	140	
Gly	Leu	Val	Asp	Arg	Tyr	Arg	Val	Thr	Arg	Cys	Arg	His	Glu	Val	Glu	145	150	155	160
Gln	Gly	Cys	Ala	Val	Leu	Arg	Ala	Thr	Pro	Leu	Ala	Asp	Met	Thr	Pro	165	170	175	
Gln	Leu	Leu	Leu	Glu	Val	Ser	Gln	Gly	Leu	Ser	Arg	Asn	Leu	Lys	Phe	180	185	190	
Leu	Thr	Asp	Ala	Cys	Ala	Leu	Ala	Ser	Asp	Lys	Ser	Arg	Asp	Arg	Phe	195	200	205	
Ser	Arg	Glu	Gln	Phe	Lys	Leu	Gly	Val	Lys	Cys	Met	Ser	Thr	Ser	Ala	210	215	220	
Ser	Ala	Leu	Leu	Ala	Cys	Val	Arg	Glu	Val	Lys	Val	Ala	Pro	Ser	Glu	225	230	235	240
Leu	Ala	Arg	Ser	Arg	Cys	Ala	Leu	Phe	Ser	Gly	Pro	Leu	Val	Gln	Ala	245	250	255	
Val	Ser	Ala	Leu	Val	Gly	Phe	Ala	Thr	Glu	Pro	Gln	Phe	Leu	Gly	Arg	260	265	270	
Ala	Ala	Ala	Val	Ser	Ala	Glu	Gly	Lys	Ala	Val	Gln	Thr	Ala	Ile	Leu	275	280	285	
Gly	Gly	Ala	Met	Ser	Val	Val	Ser	Ala	Cys	Val	Leu	Leu	Thr	Gln	Cys				

290	295	300
Leu Arg Asp Leu Ala Gln His Pro Asp Gly Gly Ala Lys Met Ser Asp		
305	310	315
His Arg Glu Arg Leu Arg Asn Ser Ala Cys Ala Val Ser Glu Gly Cys		320
	325	330
Thr Leu Leu Ser Gln Ala Leu Arg Glu Arg Ser Ser Pro Arg Thr Leu		335
	340	345
Pro Pro Val Asn Ser Asn Ser Val Asn		350
355	360	

&lt;210&gt; 3835

&lt;211&gt; 2366

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3835

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 120  
 gccatggagc acggaggggc ctacgctcgg gcggggggca gctctcgggg ctgctggtat  
 180  
 tacctgcgct acttcttctt cttcgtctcc ctcatccaat tcctcatcat cctggggctc  
 240  
 gtgctcttca tggcttatgg caacgtgcac gtgagcacag agtccaacct gcaggccacc  
 300  
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 360  
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 480  
 gtcattctaca cgaacaatca gaggtacatg gctgccaatc tcttgagtga gaagcaatgc  
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 720  
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 780  
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 1920  
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 1980  
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 2340  
 aatccttaa aaaaaaaaaa aaaaaa  
 2366

<210> 3836

<211> 479

<212> PRT

<213> Homo sapiens

<400> 3836

Xaa	Ala	Phe	Asp	Ile	Arg	Pro	Glu	Leu	Arg	Arg	Ser	Ser	Ser	Thr	Leu
1				5					10					15	
Glu	Leu	Met	Arg	Ala	Gly	Leu	Val	Val	Ser	Arg	Asp	Gly	Ala	Pro	Asp
			20						25				30		
Gly	Gly	Ile	Glu	Gln	Met	Gly	Leu	Ala	Met	Glu	His	Gly	Gly	Ser	Tyr

2990



465

470

475

&lt;210&gt; 3837

&lt;211&gt; 2084

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3837

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60  
attcagaaaa ctgtggcaca ctgttgggtg caagggtgacc ttatgagatg ggctgacagt  
120  
ggggactgcc aactcatgtg tctgttttagc tcaccttttc ctgtgcccac cctccaaccc  
180  
cccaaccatg tgggaaggaa atgtttggcc ctctgaccct aactacatcc cacagactgg  
240  
gatggaaagg tgtctgagat taagaagaag atcaagtcga tcctgcctgg aaggctcctgt  
300  
gatctactgc aagacaccag ccacctgcct cccgagcact cggatgtggt gatcgtggga  
360  
ggtgggggtgc ttggcttgtc tgtggcctat tggctgaaga agctggagag cagacgaggt  
420  
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780  
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1020  
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1140  
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1200  
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1260  
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1380



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 1920  
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 1980  
 gagcactctg gggcagcctg gctcagggtt attgattttc gtctgtttac cctatccatt  
 2040  
 aatcaatata tgtaattaac tccttcaaaa aaaaaaaaaa aaaa  
 2084

&lt;210&gt; 3838

&lt;211&gt; 468

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3838

Leu	His	Pro	Thr	Asp	Trp	Asp	Gly	Lys	Val	Ser	Glu	Ile	Lys	Lys	Lys
1				5					10					15	
Ile	Lys	Ser	Ile	Leu	Pro	Gly	Arg	Ser	Cys	Asp	Leu	Leu	Gln	Asp	Thr
			20					25					30		
Ser	His	Leu	Pro	Pro	Glu	His	Ser	Asp	Val	Val	Ile	Val	Gly	Gly	Gly
		35					40					45			
Val	Leu	Gly	Leu	Ser	Val	Ala	Tyr	Trp	Leu	Lys	Lys	Leu	Glu	Ser	Arg
	50					55				60					
Arg	Gly	Ala	Ile	Arg	Val	Leu	Val	Val	Glu	Arg	Asp	His	Thr	Tyr	Ser
65					70					75					80
Gln	Ala	Ser	Thr	Gly	Leu	Ser	Val	Gly	Gly	Ile	Cys	Gln	Gln	Phe	Ser
			85					90					95		
Leu	Pro	Glu	Asn	Ile	Gln	Leu	Ser	Leu	Phe	Ser	Ala	Ser	Phe	Leu	Arg
			100					105					110		
Asn	Ile	Asn	Glu	Tyr	Leu	Ala	Val	Val	Asp	Ala	Pro	Pro	Leu	Asp	Leu
		115					120						125		
Arg	Phe	Asn	Pro	Ser	Gly	Tyr	Leu	Leu	Leu	Ala	Ser	Glu	Lys	Asp	Ala
	130					135						140			
Ala	Ala	Met	Glu	Ser	Asn	Val	Lys	Val	Gln	Arg	Gln	Glu	Gly	Ala	Lys
145					150					155					160
Val	Ser	Leu	Met	Ser	Pro	Asp	Gln	Leu	Arg	Asn	Lys	Phe	Pro	Trp	Ile
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<210> 3839
<211> 758
<212> DNA
<213> Homo sapiens
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180
gctttggggcc aagccatcac cctccatcca gaatctgcc tttcaaaaag caagatgggg
240
ctaaccccccc tatggcgaga cagctcagct ctctcaagcc agcggaatag tttcccaact
300
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 420  
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 540  
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 660  
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&lt;210&gt; 3840

&lt;211&gt; 252

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3840

Xaa	Arg	Val	Gln	Asp	Ser	Leu	Glu	Val	Thr	Leu	Pro	Ser	Lys	Gln	Glu
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Glu	Glu	Asp	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Lys	Asp	Gln	Pro	Ala	Glu
			20					25					30		
Met	Glu	Tyr	Leu	Asn	Ser	Arg	Cys	Val	Leu	Phe	Thr	Tyr	Phe	Gln	Gly
		35					40					45			
Asp	Ile	Gly	Ser	Val	Val	Asp	Glu	His	Phe	Ser	Arg	Ala	Leu	Gly	Gln
	50					55					60				
Ala	Ile	Thr	Leu	His	Pro	Glu	Ser	Ala	Ile	Ser	Lys	Ser	Lys	Met	Gly
65					70					75					80
Leu	Thr	Pro	Leu	Trp	Arg	Asp	Ser	Ser	Ala	Leu	Ser	Ser	Gln	Arg	Asn
			85						90					95	
Ser	Phe	Pro	Thr	Ser	Phe	Trp	Thr	Ser	Ser	Tyr	Gln	Pro	Pro	Pro	Ala
			100					105					110		
Pro	Cys	Leu	Gly	Gly	Val	His	Pro	Asp	Phe	Gln	Val	Thr	Gly	Pro	Pro
		115					120					125			
Gly	Thr	Phe	Ser	Ala	Ala	Asp	Pro	Ser	Pro	Trp	Pro	Gly	His	Asn	Leu
	130					135						140			
His	Gln	Thr	Gly	Pro	Ala	Pro	Pro	Pro	Ala	Val	Ser	Glu	Ser	Trp	Pro
145					150					155					160
Tyr	Pro	Leu	Thr	Ser	Gln	Val	Ser	Pro	Ser	Tyr	Ser	His	Met	His	Asp
			165					170					175		
Val	Tyr	Met	Arg	His	His	His	Pro	His	Ala	His	Met	His	His	Arg	His
		180						185					190		
Arg	His	His	His	His	His	His	His	Pro	Pro	Ala	Gly	Ser	Ala	Leu	Asp
		195					200					205			
Pro	Ser	Tyr	Gly	Pro	Leu	Leu	Met	Pro	Ser	Val	His	Ala	Ala	Arg	Ile
	210					215					220				
Pro	Ala	Pro	Gln	Cys	Asp	Ile	Thr	Lys	Thr	Glu	Pro	Thr	Thr	Val	Thr
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245

250

<210> 3841  
 <211> 367  
 <212> DNA  
 <213> Homo sapiens

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 atagtgtgct ttctcttcct cattgaacat ccgaacgacg tcaggtgctc ctccaccctg  
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 240  
 ttgaagagcg aaaagaacaa gcctctggac ccagagatgc agtgccctgct gctctcagat  
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 367

<210> 3842  
 <211> 122  
 <212> PRT  
 <213> Homo sapiens

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 Gly Ala Ile Val Ala Ala Met Gly Ile Val Cys Phe Leu Phe Leu Ile  
 35 40 45  
 Glu His Pro Asn Asp Val Arg Cys Ser Ser Thr Leu Val Thr His Ser  
 50 55 60  
 Lys Gly Tyr Glu Asn Gly Thr Asn Arg Leu Ser Leu Pro Lys Pro Ile  
 65 70 75 80  
 Leu Lys Ser Glu Lys Asn Lys Pro Leu Asp Pro Glu Met Gln Cys Leu  
 85 90 95  
 Leu Leu Ser Asp Gly Lys Gly Ser Ile His Pro Asn His Val Val Ile  
 100 105 110  
 Leu Pro Gly Asp Gly Gly Ser Gly Pro Ala  
 115 120

<210> 3843  
 <211> 712  
 <212> DNA  
 <213> Homo sapiens

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&lt;210&gt; 3844

&lt;211&gt; 143

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3844

Met	Ala	His	Val	Gly	Ser	Arg	Lys	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser
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Arg	Gly	Arg	Gly	Ser	Glu	Lys	Arg	Lys	Lys	Lys	Ser	Arg	Lys	Asp	Thr
			20					25					30		
Ser	Arg	Asn	Cys	Ser	Ala	Ser	Thr	Ser	Gln	Gly	Arg	Lys	Ala	Ser	Thr
		35					40					45			
Ala	Pro	Gly	Ala	Glu	Ala	Ser	Pro	Ser	Pro	Cys	Ile	Thr	Glu	Arg	Ser
	50					55				60					
Lys	Gln	Lys	Ala	Arg	Arg	Arg	Thr	Arg	Ser	Ser	Ser	Ser	Ser	Ser	Ser
65					70					75					80
Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser
			85					90					95		
Ser	Ser	Asp	Gly	Arg	Lys	Lys	Arg	Gly	Lys	Tyr	Lys	Asp	Lys	Arg	Arg
		100						105					110		
Lys	Lys	Lys	Lys	Lys	Arg	Lys	Lys	Leu	Lys	Lys	Lys	Gly	Lys	Glu	Lys
		115					120					125			
Ala	Glu	Ala	Gln	Gln	Ala	Glu	His	His	Pro	Gln	Gly	Gly	Gly	Pro	
	130						135					140			

&lt;210&gt; 3845

&lt;211&gt; 2302

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3845

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 2280  
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&lt;210&gt; 3846

&lt;211&gt; 197

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3846

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			20					25					30		
Gly	Pro	Ala	Glu	Pro	Arg	Val	Ala	Gly	Ala	Gly	Ala	Ala	Ala	Ala	Glu
		35					40				45				
Gly	Ala	Ala	Ala	Gly	Ala	Cys	Gly	Pro	Ala	Arg	Cys	Ala	Asp	Gln	Gly
	50					55					60				
Gly	Ala	Arg	Glu	Arg	Gly	Gly	Arg	Gly	Gly	Arg	Gly	Ala	Gly	Gly	Gly
65				70				75						80	
Gly	Gly	Ala	His	Gly	His	Phe	Pro	Gln	Arg	Pro	Pro	Gln	Gln	Ala	Gly
			85					90						95	
Gln	Arg	Ala	Ala	Ser	Arg	Ala	Gly	Cys	Gly	His	Arg	Gln	Leu	Gln	Arg
		100						105					110		
Ala	Pro	Ala	Pro	Gly	Leu	Arg	Gln	His	Pro	Cys	Gly	Ser	Gly	Thr	Glu
		115					120					125			
Gly	Leu	Arg	Gly	Gly	His	Leu	Ser	Glu	Thr	Val	Cys	Ala	His	Ala	Glu
	130					135					140				
Arg	Thr	Gln	Ala	Pro	Leu	Gln	Ser	Ala	Leu	Gly	Gln	Pro	Ala	Pro	Arg
145				150						155				160	
Pro	His	Thr	Leu	Gln	Arg	His	Leu	Gly	Pro	His	Ala	Thr	Gly	His	Gly
			165					170						175	
Ala	Gly	Arg	Arg	Leu	Gln	Ala	Asp	Thr	Gly	Ala	Phe	Ser	Pro	Pro	Asp



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Cys Cys Phe Pro Gly  
195

185

190

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<212> DNA  
<213> Homo sapiens

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<211> 120  
<212> PRT  
<213> Homo sapiens

<400> 3848  
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35 40 45  
Met Asp Asn Val Cys Ile Ile Cys Arg Glu Glu Met Val Thr Gly Ala  
50 55 60  
Lys Arg Leu Pro Cys Asn His Ile Phe His Thr Arg Trp Glu Gly Pro  
65 70 75 80  
Trp Gly Ala Cys Pro Ala Gly Pro Arg Pro Gln Lys Ala Gly Pro Lys  
85 90 95  
Gly Pro Ala Asp Leu Cys Leu Ala Leu Thr Arg Ser Cys Leu Arg Ser  
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115 120

<210> 3849  
<211> 1139  
<212> DNA  
<213> Homo sapiens

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420

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 660  
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 720  
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<210> 3850

<211> 257

<212> PRT

<213> Homo sapiens

<400> 3850

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			20					25					30		
Phe	Pro	Phe	Asn	Gln	Trp	Gly	Leu	Gln	Pro	Arg	Ser	Leu	Leu	Leu	Gln
		35					40					45			
Ala	Ala	Arg	Gly	Tyr	Val	Val	Arg	Lys	Pro	Ala	Gln	Ser	Arg	Leu	Asp
	50					55					60				
Asp	Asp	Pro	Pro	Pro	Ser	Thr	Leu	Leu	Lys	Asp	Tyr	Gln	Asn	Val	Pro
65					70					75				80	
Gly	Ile	Glu	Lys	Val	Asp	Asp	Val	Val	Lys	Arg	Leu	Leu	Ser	Leu	Glu
			85						90					95	
Met	Ala	Asn	Lys	Lys	Glu	Met	Leu	Lys	Ile	Lys	Gln	Glu	Gln	Phe	Met
			100					105					110		
Lys	Lys	Ile	Val	Ala	Asn	Pro	Glu	Asp	Thr	Arg	Ser	Leu	Glu	Ala	Arg
		115					120					125			
Ile	Ile	Ala	Leu	Ser	Val	Lys	Ile	Arg	Ser	Tyr	Glu	Glu	His	Leu	Glu
	130					135					140				
Lys	His	Arg	Lys	Asp	Lys	Ala	His	Lys	Arg	Tyr	Leu	Leu	Met	Ser	Ile
145					150					155				160	
Asp	Gln	Arg	Lys	Lys	Met	Leu	Lys	Asn	Leu	Arg	Asn	Thr	Asn	Tyr	Asp
			165					170						175	
Val	Phe	Glu	Lys	Ile	Cys	Trp	Gly	Leu	Gly	Ile	Glu	Tyr	Thr	Phe	Pro

3002

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1140

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1183

<210> 3852

<211> 323

<212> PRT

<213> Homo sapiens

<400> 3852

Met	Val	Gly	Phe	Gly	Ala	Asn	Arg	Arg	Ala	Gly	Arg	Leu	Pro	Ser	Leu	1	5	10	15
Val	Leu	Val	Val	Leu	Leu	Val	Val	Ile	Val	Val	Leu	Ala	Phe	Asn	Tyr	20	25	30	
Trp	Ser	Ile	Ser	Ser	Arg	His	Val	Leu	Leu	Gln	Glu	Glu	Val	Ala	Glu	35	40	45	
Leu	Gln	Gly	Gln	Val	Gln	Arg	Thr	Glu	Val	Ala	Arg	Gly	Arg	Leu	Glu	50	55	60	
Lys	Arg	Asn	Ser	Asp	Leu	Leu	Leu	Val	Asp	Thr	His	Lys	Lys	Gln		65	70	75	80
Ile	Asp	Gln	Lys	Glu	Ala	Asp	Tyr	Gly	Arg	Leu	Ser	Ser	Arg	Leu	Gln	85	90	95	
Ala	Arg	Glu	Gly	Leu	Gly	Lys	Arg	Cys	Glu	Asp	Asp	Lys	Val	Lys	Leu	100	105	110	
Gln	Asn	Asn	Ile	Ser	Tyr	Gln	Met	Ala	Asp	Ile	His	His	Leu	Lys	Glu	115	120	125	
Gln	Leu	Ala	Glu	Leu	Arg	Gln	Glu	Phe	Leu	Arg	Gln	Glu	Asp	Gln	Leu	130	135	140	
Gln	Asp	Tyr	Arg	Lys	Asn	Asn	Thr	Tyr	Leu	Val	Lys	Arg	Leu	Glu	Tyr	145	150	155	160
Glu	Ser	Phe	Gln	Cys	Gly	Gln	Gln	Met	Lys	Glu	Leu	Arg	Ala	Gln	His	165	170	175	
Glu	Glu	Asn	Ile	Lys	Lys	Leu	Ala	Asp	Gln	Phe	Leu	Glu	Glu	Gln	Lys	180	185	190	
Gln	Glu	Thr	Gln	Lys	Ile	Gln	Ser	Asn	Asp	Gly	Lys	Glu	Leu	Asp	Ile	195	200	205	
Asn	Asn	Gln	Val	Val	Pro	Lys	Asn	Ile	Pro	Lys	Val	Ala	Glu	Asn	Val	210	215	220	
Ala	Asp	Lys	Asn	Glu	Glu	Pro	Ser	Ser	Asn	His	Ile	Pro	His	Gly	Lys	225	230	235	240
Glu	Gln	Ile	Lys	Arg	Gly	Gly	Asp	Ala	Gly	Met	Pro	Gly	Ile	Glu	Glu	245	250	255	
Asn	Asp	Leu	Ala	Lys	Val	Asp	Asp	Leu	Pro	Pro	Ala	Leu	Arg	Lys	Pro	260	265	270	
Pro	Ile	Ser	Val	Ser	Gln	His	Glu	Ser	His	Gln	Ala	Ile	Ser	His	Leu	275	280	285	
Pro	Thr	Gly	Gln	Pro	Leu	Ser	Pro	Asn	Met	Pro	Pro	Asp	Ser	His	Ile	290	295	300	
Asn	His	Asn	Gly	Asn	Pro	Gly	Thr	Ser	Lys	Gln	Asn	Pro	Ser	Ser	Pro	305	310	315	320
Leu	His	Ala																	

<210> 3853  
 <211> 375  
 <212> DNA  
 <213> Homo sapiens

<400> 3853  
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 120  
 atggacgaac gaaggactat taaactcagt gagtggtaca gaggatttgc tgactcagaa  
 180  
 cgcaaagtta ttcccatcat ttcaaatgt ttggaaggaa tgattcttgc agcaaatca  
 240  
 gttgatgaaa gaagagactc tcaaatggtg gtagactcct tcaaatctgg ttttgaacct  
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 360  
 actatcagtg catcc  
 375

<210> 3854  
 <211> 125  
 <212> PRT  
 <213> Homo sapiens

<400> 3854  
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 20 25 30  
 Gln Ile Tyr Lys Gln Leu Gln Glu Met Asp Glu Arg Arg Thr Ile Lys  
 35 40 45  
 Leu Ser Glu Cys Tyr Arg Gly Phe Ala Asp Ser Glu Arg Lys Val Ile  
 50 55 60  
 Pro Ile Ile Ser Lys Cys Leu Glu Gly Met Ile Leu Ala Ala Lys Ser  
 65 70 75 80  
 Val Asp Glu Arg Arg Asp Ser Gln Met Val Val Asp Ser Phe Lys Ser  
 85 90 95  
 Gly Phe Glu Pro Pro Gly Asp Phe Pro Phe Glu Asp Tyr Ser Gln His  
 100 105 110  
 Ile Tyr Arg Thr Ile Ser Asp Gly Thr Ile Ser Ala Ser  
 115 120 125

<210> 3855  
 <211> 1377  
 <212> DNA  
 <213> Homo sapiens

<400> 3855  
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cagaactgtg gctctggtgt ggttgggata gtggactatg gacctagacc caacaagagt  
 180  
 gaaatgtggg atgtcttctg ctatcggatg aaagatgtga actgcacctg caaggtgggc  
 240  
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 300  
 tcactcacia acttcctgac ggaagtgtg gcctattcca acagctcagc tcgaggccgt  
 360  
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 420  
 agtgggctgg gggagaatga gaccttgtct gggcgggaca tcgagcacca cctcgccaat  
 480  
 gtcagcatgt ttttctacaa tgacctgtc aatggcacen accctgcaaa cgagggtggg  
 540  
 aagcaagctg ctcatcactg ccagccagga cccactnncc aaccgacgga gaccaggttt  
 600  
 gttgatggaa gagccattct gcagtgggac atctttgcct ccaatgggat cattcatgtc  
 660  
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 720  
 gcagggatct tctttgccat catcctggtg actggggctg ttgccttggc tgcttactcc  
 780  
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 840  
 aatgttgcag ctcttgga gacagcgcct gagaatatct cgaaccctt gtatgagagc  
 900  
 acaacctcag ctccccaga accttctac gacccttca cggactctga agaacggcag  
 960  
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 1020  
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 1080  
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 1200  
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 1377

&lt;210&gt; 3856

&lt;211&gt; 330

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3856

Xaa	Ala	Ala	Thr	Met	Ala	Thr	Tyr	Asn	Gln	Leu	Ser	Tyr	Ala	Gln	Lys
1				5				10						15	
Ala	Lys	Tyr	His	Leu	Cys	Ser	Ala	Gly	Trp	Leu	Glu	Thr	Gly	Arg	Val
			20					25					30		
Ala	Tyr	Pro	Thr	Ala	Phe	Ala	Ser	Gln	Asn	Cys	Gly	Ser	Gly	Val	Val



35	40	45
Gly Ile Val Asp Tyr Gly	Pro Arg Pro Asn Lys	Ser Glu Met Trp Asp
50	55	60
Val Phe Cys Tyr Arg Met	Lys Asp Val Asn Cys	Thr Cys Lys Val Gly
65	70	75
Tyr Val Gly Asp Gly Phe	Ser Cys Ser Gly Asn	Leu Leu Gln Val Leu
85	90	95
Met Ser Phe Pro Ser Leu	Thr Asn Phe Leu Thr	Glu Val Leu Ala Tyr
100	105	110
Ser Asn Ser Ser Ala Arg	Gly Arg Ala Phe Leu	Glu His Leu Thr Asp
115	120	125
Leu Ser Ile Arg Gly Thr	Leu Phe Val Pro Gln	Asn Ser Gly Leu Gly
130	135	140
Glu Asn Glu Thr Leu Ser	Gly Arg Asp Ile Glu	His His Leu Ala Asn
145	150	155
Val Ser Met Phe Phe Tyr	Asn Asp Leu Val Asn	Gly Thr Xaa Pro Ala
165	170	175
Asn Glu Gly Gly Lys Gln	Ala Ala His His Cys	Gln Pro Gly Pro Thr
180	185	190
Xaa Gln Pro Thr Glu Thr	Arg Phe Val Asp Gly	Arg Ala Ile Leu Gln
195	200	205
Trp Asp Ile Phe Ala Ser	Asn Gly Ile Ile His	Val Ile Ser Arg Pro
210	215	220
Leu Lys Ala Pro Pro Ala	Pro Val Thr Leu Thr	His Thr Gly Leu Gly
225	230	235
Ala Gly Ile Phe Phe Ala	Ile Ile Leu Val Thr	Gly Ala Val Ala Leu
245	250	255
Ala Ala Tyr Ser Tyr Phe	Arg Ile Asn Arg Arg	Thr Ile Gly Phe Gln
260	265	270
His Phe Glu Ser Glu Glu	Asp Ile Asn Val Ala	Ala Leu Gly Lys Gln
275	280	285
Gln Pro Glu Asn Ile Ser	Asn Pro Leu Tyr Glu	Ser Thr Thr Ser Ala
290	295	300
Pro Pro Glu Pro Ser Tyr	Asp Pro Phe Thr Asp	Ser Glu Glu Arg Gln
305	310	315
Leu Glu Gly Asn Asp Pro	Leu Arg Thr Leu	
325	330	

&lt;210&gt; 3857

&lt;211&gt; 797

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3857

```

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120
ccttccacca ggtcctgggc gagaagcata agcgcggcca cctggccgag gccgagggcc
180
acagggacac ttgcgacgaa gactcgggtgg ccggcgagtc ggaccgcata gacgatggca
240
ctgttaatgg ccgcggctgc tccccgggag agtcggcctc ggggggcctg tccaaaaagc
300

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tgctgctggg cagccccagc tcgctgagcc ccttctctaa gcgcatcaag ctcgagaagg  
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 agttcgacct gccccggcc gcgatgcca acacggagaa cgtgtactcg cagtggctcg  
 420  
 ccggctacgc ggctccagg cagctcaaag atcccttcct tagcttcgga gactccagac  
 480  
 aatcgccctt tgctcctcg tcggagcact cctcggagaa cgggagcttg cgcttctcca  
 540  
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 660  
 gcgacacttg ttcttcacac accccattc ggcgtagtac ccagagagct caagatgtgt  
 720  
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 780  
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 797

<210> 3858

<211> 76

<212> PRT

<213> Homo sapiens

<400> 3858

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Ala	Thr	Arg	Ala	Ala	Pro	Cys	Pro	Thr	Ser	Cys	Arg	Ala	Trp	Cys	Ser
			20					25					30		
Ala	Pro	Cys	Ser	Thr	Ser	Ala	Arg	Pro	Ser	Thr	Arg	Ser	Trp	Ala	Arg
		35					40					45			
Ser	Ile	Ser	Ala	Ala	Thr	Trp	Pro	Arg	Pro	Arg	Ala	Thr	Gly	Thr	Leu
	50					55					60				
Ala	Thr	Lys	Thr	Arg	Trp	Pro	Ala	Ser	Arg	Thr	Ala				
65					70					75					

<210> 3859

<211> 1449

<212> DNA

<213> Homo sapiens

<400> 3859

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 120  
 tttgaagctc ggagtaaaac tgcttgcaag cacctctgga agtgcagtgt ggaacatcat  
 180  
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 240  
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 300  
 ctttctattc agcttccccg gcctgatcag aatgtgacaa gaagtcgaag caagacttac  
 360

cctaagcgaa tagcacaac acagccagct gaatcaaaca ccatcagtag gataactgca  
 420  
 aacatggaaa atggagaaaa tgaaggaaca attaaaatta ttgcaccttc accagtaaaa  
 480  
 agctttaaga aagcaaagaa tgaaaatagc cctgataccc aaagaagcaa atctcatgca  
 540  
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 600  
 tcgccaagat tcccttacac gcgtcgccga aacccctcct gtggaagtga caatgattct  
 660  
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 720  
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 780  
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 840  
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 900  
 aggcgatcca gacacagatc tcgttcgaga agccccgata tccaagcaaa agaagagtta  
 960  
 tggaagcaca ttcaaaaaga acttgtggat ccatccggat tgtccgaaga acaattaaaa  
 1020  
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 1080  
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 1140  
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 1200  
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 1260  
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 1320  
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 1440  
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 1449

<210> 3860

<211> 348

<212> PRT

<213> Homo sapiens

<400> 3860

Tyr	Lys	Asn	Lys	Lys	Gln	Val	Gly	Lys	Tyr	Phe	Trp	Pro	Arg	Ile	Thr
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Lys	Val	His	Phe	Lys	Glu	Thr	Gln	Phe	Glu	Leu	Arg	Val	Leu	Gly	Lys
			20					25					30		
Asp	Cys	Asn	Glu	Thr	Ser	Phe	Phe	Phe	Glu	Ala	Arg	Ser	Lys	Thr	Ala
		35						40				45			
Cys	Lys	His	Leu	Trp	Lys	Cys	Ser	Val	Glu	His	His	Thr	Phe	Phe	Arg
	50					55					60				
Met	Pro	Glu	Asn	Glu	Ser	Asn	Ser	Leu	Ser	Arg	Lys	Leu	Ser	Lys	Phe

65		70		75		80									
Gly	Ser	Ile	Arg	Tyr	Lys	His	Arg	Tyr	Ser	Gly	Arg	Thr	Ala	Leu	Gln
				85					90					95	
Met	Ser	Arg	Asp	Leu	Ser	Ile	Gln	Leu	Pro	Arg	Pro	Asp	Gln	Asn	Val
			100					105					110		
Thr	Arg	Ser	Arg	Ser	Lys	Thr	Tyr	Pro	Lys	Arg	Ile	Ala	Gln	Thr	Gln
		115					120					125			
Pro	Ala	Glu	Ser	Asn	Thr	Ile	Ser	Arg	Ile	Thr	Ala	Asn	Met	Glu	Asn
	130					135					140				
Gly	Glu	Asn	Glu	Gly	Thr	Ile	Lys	Ile	Ile	Ala	Pro	Ser	Pro	Val	Lys
145					150					155				160	
Ser	Phe	Lys	Lys	Ala	Lys	Asn	Glu	Asn	Ser	Pro	Asp	Thr	Gln	Arg	Ser
			165					170					175		
Lys	Ser	His	Ala	Pro	Trp	Glu	Glu	Asn	Gly	Pro	Gln	Ser	Gly	Leu	Tyr
			180					185					190		
Asn	Ser	Pro	Ser	Asp	Arg	Thr	Lys	Ser	Pro	Lys	Phe	Pro	Tyr	Thr	Arg
		195					200					205			
Arg	Arg	Asn	Pro	Ser	Cys	Gly	Ser	Asp	Asn	Asp	Ser	Val	Gln	Pro	Val
	210					215					220				
Arg	Arg	Arg	Lys	Ala	His	Asn	Ser	Gly	Glu	Asp	Ser	Asp	Leu	Lys	Gln
225					230					235				240	
Arg	Arg	Arg	Ser	Arg	Ser	Arg	Cys	Asn	Thr	Ser	Ser	Gly	Ser	Glu	Ser
			245					250				255			
Glu	Asn	Ser	Asn	Arg	Glu	His	Arg	Lys	Lys	Arg	Asn	Arg	Ile	Arg	Gln
			260					265				270			
Glu	Asn	Asp	Met	Val	Asp	Ser	Ala	Pro	Gln	Trp	Glu	Ala	Val	Leu	Arg
	275						280				285				
Arg	Gln	Lys	Glu	Lys	Asn	Gln	Ala	Asp	Pro	Asn	Asn	Arg	Arg	Ser	Arg
	290					295					300				
His	Arg	Ser	Arg	Ser	Arg	Ser	Pro	Asp	Ile	Gln	Ala	Lys	Glu	Glu	Leu
305					310					315				320	
Trp	Lys	His	Ile	Gln	Lys	Glu	Leu	Val	Asp	Pro	Ser	Gly	Leu	Ser	Glu
			325					330				335			
Glu	Gln	Leu	Lys	Glu	Ile	Pro	Tyr	Thr	Lys	Ile	Glu				
		340						345							

&lt;210&gt; 3861

&lt;211&gt; 748

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3861

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 180  
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 240  
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 360

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 420  
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 480  
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 748

&lt;210&gt; 3862

&lt;211&gt; 210

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3862

Met	Ser	Gly	Asp	Lys	Leu	Leu	Ser	Glu	Leu	Gly	Tyr	Lys	Leu	Gly	Arg
1				5				10					15		
Thr	Ile	Gly	Glu	Gly	Ser	Tyr	Ser	Lys	Val	Lys	Val	Ala	Thr	Ser	Lys
		20						25				30			
Lys	Tyr	Lys	Gly	Thr	Val	Ala	Ile	Lys	Val	Val	Asp	Arg	Arg	Arg	Ala
		35					40				45				
Pro	Pro	Asp	Phe	Val	Asn	Lys	Phe	Leu	Pro	Arg	Glu	Leu	Ser	Ile	Leu
	50					55				60					
Arg	Gly	Val	Arg	His	Pro	His	Ile	Val	His	Val	Phe	Glu	Phe	Ile	Glu
65					70				75					80	
Val	Cys	Asn	Gly	Lys	Leu	Tyr	Ile	Val	Met	Glu	Ala	Ala	Ala	Thr	Asp
			85					90						95	
Leu	Leu	Gln	Ala	Val	Gln	Arg	Asn	Gly	Arg	Ile	Pro	Gly	Val	Gln	Ala
		100						105					110		
Arg	Asp	Leu	Phe	Ala	Gln	Ile	Ala	Gly	Ala	Val	Arg	Tyr	Leu	His	Asp
	115						120				125				
His	His	Leu	Val	His	Arg	Asp	Leu	Lys	Cys	Glu	Asn	Val	Leu	Leu	Ser
	130					135					140				
Pro	Asp	Glu	Arg	Arg	Val	Lys	Leu	Thr	Asp	Phe	Gly	Phe	Gly	Arg	Gln
145					150					155					160
Ala	His	Gly	Tyr	Pro	Asp	Leu	Ser	Thr	Thr	Tyr	Cys	Gly	Ser	Ala	Val
			165					170						175	
Arg	Val	Thr	Arg	Val	Met	His	Phe	Leu	Ser	Thr	Tyr	Cys	Leu	Pro	Gly
		180						185					190		
Pro	Arg	Ala	His	Gly	Glu	Glu	Thr	Trp	Ala	His	Pro	Cys	Arg	Lys	Arg
		195					200					205			
Asp	Asn														
	210														

&lt;210&gt; 3863

&lt;211&gt; 341

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3863

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 341

&lt;210&gt; 3864

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3864

Met	Ala	Cys	Pro	Lys	Arg	Leu	Ile	Lys	Ile	Tyr	Ser	Asp	Ser	Ile	Met
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Ile	Gly	Trp	Leu	Ala	Trp	Asn	Val	Pro	Ser	Ala	Trp	Thr	Leu	Arg	Glu
			20					25					30		
Leu	Gly	Cys	Gln	Pro	Met	Ala	Arg	Trp	Phe	Ser	Gly	Ser	Leu	Asp	Gln
		35					40					45			
Lys	Asn	Leu	Val	Glu	Ile	Ser	His	Thr	Val	Phe	Phe	Pro	Glu	Ser	Gln
	50					55				60					
Leu	Arg	Ala	Lys	Leu	Lys	Cys	Pro	Gly	Gly	Ser	Cys	Thr	Pro	Gly	Leu
65					70					75				80	
Lys	Lys	Ile	Gly	Ser	Leu	Lys	Val	Ser	Cys	Glu	Glu	Phe	Leu	Leu	Met
			85					90					95		
Gly	Leu	Arg	Tyr	Gln	His	Leu	Asp	Pro	Pro	Ser	Arg				
			100					105							

&lt;210&gt; 3865

&lt;211&gt; 492

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3865

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 300  
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 360

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<210> 3866  
 <211> 109  
 <212> PRT  
 <213> Homo sapiens

<400> 3866  
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 Ile Ile Asn Thr Asn Gly Leu Gly Gln Pro Ser His Ser Ser Leu Leu  
 35 40 45  
 Phe Thr Ser Leu Gln Leu Gln Leu Ser Phe Phe Ile Thr Leu Leu Phe  
 50 55 60  
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 65 70 75 80  
 Met Leu Gly Ser Arg Pro Gly Ala Ala Ala His Pro Cys Asn Pro Ser  
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<210> 3867  
 <211> 1032  
 <212> DNA  
 <213> Homo sapiens

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 420  
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<210> 3868

<211> 344

<212> PRT

<213> Homo sapiens

<400> 3868

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			20					25					30		
Gln	Leu	Ser	Glu	Met	His	Asp	Glu	Leu	Asp	Ser	Ala	Lys	Arg	Ser	Glu
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Asp	Leu	Gln	Asp	Leu	Leu	Ile	Ala	Lys	Glu	Glu	Gln	Glu	Asp	Leu	Leu
65				70					75					80	
Arg	Lys	Arg	Glu	Arg	Glu	Leu	Thr	Ala	Leu	Lys	Gly	Ala	Leu	Lys	Glu
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Glu	Val	Ser	Ser	His	Asp	Gln	Glu	Met	Asp	Lys	Leu	Lys	Glu	Gln	Tyr
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Asp	Ala	Glu	Leu	Gln	Ala	Leu	Arg	Glu	Ser	Val	Glu	Glu	Ala	Thr	Lys
	115						120					125			
Asn	Val	Glu	Val	Leu	Ala	Ser	Arg	Ser	Asn	Thr	Ser	Glu	Gln	Asp	Gln
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Ala	Gly	Thr	Glu	Met	Arg	Val	Lys	Leu	Leu	Gln	Glu	Glu	Asn	Glu	Lys
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Leu	Gln	Gly	Arg	Ser	Glu	Glu	Leu	Glu	Arg	Arg	Val	Ala	Gln	Leu	Gln
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Arg	Gln	Ile	Glu	Asp	Leu	Lys	Gly	Asp	Glu	Ala	Lys	Ala	Lys	Glu	Thr
	180						185					190			
Leu	Lys	Lys	Tyr	Glu	Gly	Glu	Ile	Arg	Gln	Leu	Glu	Glu	Ala	Leu	Val
	195						200					205			
His	Ala	Arg	Lys	Glu	Glu	Lys	Glu	Ala	Val	Ser	Ala	Arg	Arg	Ala	Leu
	210					215				220					
Glu	Asn	Glu	Leu	Glu	Ala	Ala	Gln	Gly	Asn	Leu	Ser	Gln	Thr	Thr	Gln
225				230				235						240	
Glu	Gln	Lys	Gln	Leu	Ser	Glu	Lys	Leu	Lys	Glu	Glu	Ser	Glu	Gln	Lys

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	260		265		270
Leu Gly Lys Thr Ile Glu Lys Leu Gln Lys Glu Met Ala Asp Ile Val					
	275		280		285
Glu Ala Ser Arg Thr Ser Thr Leu Glu Leu Gln Asn Gln Leu Asp Glu					
	290		295		300
Tyr Lys Glu Lys Asn Arg Arg Glu Leu Ala Glu Met Gln Arg Gln Leu					
305		310		315	320
Lys Glu Lys Thr Leu Glu Ala Glu Lys Ser Arg Leu Thr Ala Met Lys					
	325		330		335
Met Gln Asp Glu Met Arg Leu Met					
	340				

&lt;210&gt; 3869

&lt;211&gt; 1226

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3869

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<210> 3870  
<211> 100  
<212> PRT  
<213> Homo sapiens

<400> 3870  
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Leu Leu Gly Ser Gln Trp His Leu Ser Val Ala Ser Tyr Leu Pro Gly  
35 40 45  
Pro Gly Trp Gly Thr Val Cys Gly His Glu Ala Arg Pro Pro Pro Ala  
50 55 60  
Pro Leu Pro Arg Gly Ser Ser Ile Pro Leu His Phe Trp Asn Val Cys  
65 70 75 80  
Ala Ser Met Met Phe Val Tyr Leu Arg His Leu Lys Ile Tyr Phe Arg  
85 90 95  
Tyr Glu Gly Lys  
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<210> 3871  
<211> 473  
<212> DNA  
<213> Homo sapiens

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 <213> Homo sapiens

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 35 40 45  
 Ala Glu Lys Thr Glu Lys Thr His Lys Gly Ser Lys Lys Gln Lys Lys  
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<210> 3873  
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 <212> DNA  
 <213> Homo sapiens

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 869

<210> 3874

&lt;211&gt; 289

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3874

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 20 25 30  
 Glu Ala Tyr His Leu Ser Phe Glu Arg Arg Gln Lys Ser Ser Glu Ala  
 35 40 45  
 Pro Val Gln Ser Pro Gln Arg Ser Val Asp Ser Ile Ser Gln Glu Ser  
 50 55 60  
 Ser Thr Ser Ser Phe Ser Ser Met Ser Ala Gly Ser Arg Gln Glu Glu  
 65 70 75 80  
 Thr Lys Lys Asp Tyr Arg Glu Val Glu Lys Leu Leu Arg Ala Val Ala  
 85 90 95  
 Asp Gly Asp Leu Glu Met Val Arg Tyr Leu Leu Glu Trp Thr Glu Glu  
 100 105 110  
 Asp Leu Glu Asp Ala Glu Asp Thr Val Ser Ala Ala Asp Pro Glu Phe  
 115 120 125  
 Cys His Pro Leu Cys Gln Cys Pro Lys Cys Ala Pro Ala Gln Lys Arg  
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 Leu Ala Lys Val Pro Ala Ser Gly Leu Gly Val Asn Val Thr Ser Gln  
 145 150 155 160  
 Asp Gly Ser Ser Pro Leu His Val Ala Ala Leu His Gly Arg Ala Asp  
 165 170 175  
 Leu Ile Arg Leu Leu Leu Lys His Gly Ala Asn Ala Gly Ala Arg Asn  
 180 185 190  
 Ala Asp Gln Ala Val Pro Leu His Leu Ala Cys Gln Gln Gly His Phe  
 195 200 205  
 Gln Val Val Lys Cys Leu Leu Asp Ser Asn Ala Lys Pro Asn Lys Lys  
 210 215 220  
 Asp Leu Ser Gly Asn Thr Pro Leu Ile Tyr Ala Cys Ser Gly Gly His  
 225 230 235 240Glu Leu  
 Val Ala Leu Leu Leu Gln His Gly Ala Ser Ile Asn Ala  
 245 250 255  
 Leu Thr Ile Arg Gly Asn Thr Ala Leu His Glu Ala Val Ile Glu Lys  
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 His Val Phe Val Val Glu Leu Leu Leu Leu His Gly Ala Ser Val Arg  
 275 280 285  
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&lt;210&gt; 3875

&lt;211&gt; 2640

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3875

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 2640

&lt;210&gt; 3876

&lt;211&gt; 824

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3876

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Gly	Gln	Glu	Leu	Leu	Val	Ala	Trp	Asn	Thr	Val	Ser	Thr	Gly	Leu	Val
			20					25					30		
Pro	Pro	Ala	Ala	Leu	Gly	Leu	Val	Ser	Ser	Arg	Thr	Ser	Gly	Ala	Val
		35					40					45			
Pro	Pro	Lys	Glu	Glu	Glu	Leu	Arg	Ala	Ala	Val	Glu	Val	Leu	Arg	Gly
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His	Gly	Leu	His	Ser	Val	Leu	Glu	Glu	Trp	Phe	Val	Glu	Val	Leu	Gln
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Asn	Asp	Leu	Gln	Ala	Asn	Ile	Ser	Pro	Glu	Phe	Trp	Asn	Ala	Ile	Ser
			85						90					95	
Gln	Cys	Glu	Asn	Ser	Ala	Asp	Glu	Pro	Gln	Cys	Leu	Leu	Leu	Leu	Leu
			100				105						110		
Asp	Ala	Phe	Gly	Leu	Leu	Glu	Ser	Arg	Leu	Asp	Pro	Tyr	Leu	Arg	Ser
	115						120					125			
Leu	Glu	Leu	Leu	Glu	Lys	Trp	Thr	Arg	Leu	Gly	Leu	Leu	Met	Gly	Thr



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Gly Ala Gln Gly Leu Arg Glu Glu Val His Thr Met Leu Arg Gly Val				
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Leu Phe Phe Ser Thr Pro Arg Thr Phe Gln Glu Met Ile Gln Arg Leu				
		165		170
Tyr Gly Cys Phe Leu Arg Val Tyr Met Gln Ser Lys Arg Lys Gly Glu				
		180		185
Gly Gly Thr Asp Pro Glu Leu Glu Gly Glu Leu Asp Ser Arg Tyr Ala				
		195		200
Arg Arg Arg Tyr Tyr Arg Leu Leu Gln Ser Pro Leu Cys Ala Gly Cys				
		210		215
Ser Ser Asp Lys Gln Gln Cys Trp Cys Arg Gln Ala Leu Glu Gln Phe				
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His Gln Leu Ser Gln Val Leu His Arg Leu Ser Leu Leu Glu Arg Val				
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Ser Ala Glu Ala Val Thr Thr Thr Leu His Gln Val Thr Arg Glu Arg				
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Met Glu Asp Arg Cys Arg Gly Glu Tyr Glu Arg Ser Phe Leu Arg Glu				
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Phe His Arg Trp Ile Glu Arg Val Val Gly Trp Leu Gly Lys Val Phe				
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Leu Gln Asp Gly Pro Ala Arg Pro Ala Ser Pro Glu Ala Gly Asn Thr				
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Leu Arg Arg Trp Arg Cys His Val Gln Arg Phe Phe Tyr Arg Ile Tyr				
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Ala Ser Leu Arg Ile Glu Glu Leu Phe Ser Ile Val Arg Asp Phe Pro				
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Asp Ser Arg Pro Ala Ile Glu Asp Leu Lys Tyr Cys Leu Glu Arg Thr				
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Asp Gln Arg Gln Gln Leu Leu Val Ser Leu Lys Ala Ala Leu Glu Thr				
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Ile Ser Ala Ile Lys Ala Leu Arg Val Leu Asp Pro Ser Met Val Ile				
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Leu Glu Val Ala Cys Glu Pro Ile Arg Arg Tyr Leu Arg Thr Arg Glu				
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Asp Thr Val Arg Gln Ile Val Ala Gly Leu Thr Gly Asp Ser Asp Gly				
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Thr Gly Asp Leu Ala Val Glu Leu Ser Lys Thr Asp Pro Ala Ser Leu				
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Glu Thr Gly Gln Asp Ser Glu Asp Asp Ser Gly Glu Pro Glu Asp Trp				
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Val Pro Asp Pro Val Asp Ala Asp Pro Gly Lys Ser Ser Ser Lys Arg				
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Leu Lys Asp Met Ala Asp Ser Arg Arg Ile Asn Ala Asn Ile Arg Glu				

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 675 680 685  
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 Ser Gly Leu Arg Thr Gly Xaa Asn Met Val Leu Ile Asp Ser Asp Asp  
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&lt;210&gt; 3877

&lt;211&gt; 1112

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3877

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<210> 3878

<211> 370

<212> PRT

<213> Homo sapiens

<400> 3878

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Asp	Ser	Cys	His	Ser	Thr	Thr	Lys	Thr	Glu	Ala	Ser	Gln	Glu	Glu	Arg
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Lys	Arg	Leu	Ala	Ala	Leu	Glu	Ala	Arg	Gln	Lys	Ala	Lys	Glu	Val	Gln
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 <212> PRT  
 <213> Homo sapiens

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 Ala Ile Asp Leu Ser Arg Asn Gln Phe Gln Asp Phe Pro Glu Gln Leu  
 35 40 45  
 Thr Ala Leu Pro Ala Leu Glu Thr Ile Asn Leu Glu Glu Asn Glu Ile  
 50 55 60  
 Val Asp Val Pro Val Glu Lys Leu Ala Ala Met Pro Ala Leu Arg Ser  
 65 70 75 80  
 Ile Asn Leu Arg Phe Asn Pro Leu Asn Ala Glu Val Arg Val Ile Ala  
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 <212> DNA  
 <213> Homo sapiens

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&lt;210&gt; 3882

&lt;211&gt; 277

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3882

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			20				25					30			
Gln	Met	Pro	Ser	Leu	Asn	Trp	Pro	Glu	Ala	Leu	Pro	Pro	Pro	Pro	Pro



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 <211> 199  
 <212> PRT  
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 50 55 60  
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 65 70 75 80  
 Lys Lys Lys Arg Lys Lys Leu Lys Lys Lys Gly Lys Glu Lys Ala Glu  
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 100 105 110  
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 115 120 125  
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 130 135 140  
 Arg Gln Ser Val Ile Arg Lys Val Val Asp Pro Glu Thr Gly Arg Thr  
 145 150 155 160  
 Arg Leu Ile Lys Gly Asp Gly Glu Val Leu Glu Glu Ile Val Thr Lys  
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&lt;400&gt; 3885

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<210> 3886

<211> 277

<212> PRT

<213> Homo sapiens

<400> 3886

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			20					25					30		
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<211> 5612

<212> DNA

<213> Homo sapiens

<400> 3887

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&lt;210&gt; 3888

&lt;211&gt; 1230

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3888

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Glu	Leu	Gln	Lys	Asp	Ser	Ile	Lys	Leu	Asp	Asp	Asp	Ser	Glu	Arg	Lys
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Val	Ile	Gly	Glu	Leu	Pro	Pro	Ala	Ser	Ser	Gly	Ser	Ala	Leu	Ala	Ala
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Lys Ile Asp Leu Arg Pro Val Leu Gly Glu Gly Val Pro Ile Leu Ala		
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 Met Tyr Thr Leu Leu Asp Ser Cys Leu Asp Arg Leu Asp Ile Phe Glu  
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&lt;210&gt; 3889

&lt;211&gt; 556

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3889

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 His Glu Ala His Asp Gln Gly Gly Trp Asp Ala Arg Gln Ser Ile Ile  
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 Asp Gly Glu Val Leu Glu Glu Ile Val Thr Lys Glu Arg His Arg Glu  
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&lt;210&gt; 3892

&lt;211&gt; 179

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3892

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			20					25					30		
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		35					40					45			
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His	Gln	Leu	Phe	Ala	Leu	Glu	Lys	Leu	Asp	Val	Thr	Gly	Asn	Gly	His
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Glu	Glu	Val	Val	Ala	Cys	Ala	Trp	Asp	Gly	Gln	Thr	Tyr	Ile	Ile	Asp
			85						90					95	
His	Asn	Arg	Thr	Val	Val	Arg	Phe	Gln	Val	Asp	Glu	Asn	Ile	Arg	Ala
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Phe	Cys	Ala	Gly	Leu	Tyr	Ala	Cys	Lys	Glu	Gly	Arg	Asn	Ser	Pro	Cys
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&lt;210&gt; 3893

&lt;211&gt; 1591

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3893

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<211> 334

<212> PRT

<213> Homo sapiens

<400> 3894

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Thr	Ile	Asp	Thr	Val	Ser	Val	Pro	Tyr	Val	Phe	Arg	Tyr	Phe	Val	Ala		
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&lt;210&gt; 3895

&lt;211&gt; 1227

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3895

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 <213> Homo sapiens

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 35 40 45  
 Ile Glu Ser Thr Ser Pro Ile Ser Arg Thr Asp Glu Ile Arg Lys Asn  
 50 55 60  
 Thr Tyr Arg Thr Leu Asp Ser Leu Glu Gln Thr Ile Lys Gln Leu Glu  
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 Ala Ser Pro Arg Pro Leu Leu Val Pro Asp Glu Gly Pro Thr Ala Leu  
 115 120 125  
 Glu Pro Pro Thr Ser Ile Pro Ser Ala Ser Arg Lys Gly Ser Ser Gly  
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 Pro Gly Thr Leu Asp Lys Pro Gly Lys Gln Ser Lys Leu Gln Asp Pro  
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 Arg Gln Tyr Arg Gln Ala Asn Gly Ser Ala Lys Lys Ser Gly Gly Asp  
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 Phe Lys Pro Thr Ser Pro Ser Leu Pro Ala Ser Lys Ile Pro Ala Leu  
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 260 265 270  
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 His Pro Arg Phe Val His Glu Trp Lys Ala Met Leu Thr Ala Ala Gln  
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 Cys Val Gln Asp Val Ser Glu Thr Pro Val Pro Leu Pro Val Pro Leu  
 50 55 60  
 Ser Val Pro Leu Ser Thr Ser Val Thr Ser Ser Leu Arg Gly Ser His  
 65 70 75 80  
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<211> 249

<212> PRT

<213> Homo sapiens

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Cys	Asp	Met	Gln	Glu	Lys	Phe	Arg	His	Asn	Ile	Ala	Tyr	Phe	Pro	Gln
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&lt;210&gt; 3901

&lt;211&gt; 1287

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3901

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<210> 3902

<211> 312

<212> PRT

<213> Homo sapiens

<400> 3902

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Ser	Ile	Ala	Val	Ala	Lys	Ala	Phe	Ala	Ser	Gln	Asn	Asn	Tyr	Arg	Ile
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Asp	Ala	Asn	Gln	Glu	Leu	Leu	Ala	Ile	Gly	Leu	Thr	Asn	Met	Leu	Gly
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Ser	Leu	Val	Ser	Ser	Tyr	Pro	Val	Thr	Gly	Ser	Phe	Gly	Arg	Thr	Ala
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Val	Asn	Ala	Gln	Ser	Gly	Val	Cys	Thr	Pro	Ala	Gly	Gly	Leu	Val	Thr
			165						170					175	
Gly	Val	Leu	Val	Leu	Leu	Ser	Leu	Asp	Tyr	Leu	Thr	Ser	Leu	Phe	Tyr
		180						185					190		
Tyr	Ile	Pro	Lys	Ser	Ala	Leu	Ala	Ala	Val	Ile	Ile	Met	Ala	Val	Ala
		195					200					205			
Pro	Leu	Phe	Asp	Thr	Lys	Ile	Phe	Arg	Thr	Leu	Trp	Arg	Val	Lys	Arg
	210					215					220				
Leu	Asp	Leu	Leu	Pro	Leu	Cys	Val	Thr	Phe	Leu	Leu	Cys	Phe	Trp	Glu
225					230					235				240	
Val	Gln	Tyr	Gly	Ile	Leu	Ala	Gly	Ala	Leu	Val	Ser	Leu	Leu	Met	Leu



				245						250					255				
Leu	His	Ser	Ala	Ala	Arg	Pro	Glu	Thr	Lys	Val	Ser	Glu	Gly	Pro	Val				
			260						265				270						
Leu	Val	Leu	Gln	Pro	Ala	Ser	Gly	Leu	Ser	Phe	Pro	Val	Leu	Cys	Pro				
		275					280					285							
Pro	Leu	Pro	Ala	Val	Gln	Asp	Pro	Lys	Thr	Leu	Ser	Pro	Thr	Leu	Ser				
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Ser	Pro	Gln	Gly	Cys	Arg	His	Leu												
305					310														

&lt;210&gt; 3903

&lt;211&gt; 598

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3903

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gccttcgacc tccgccagga gagtgggaac aatgaggtca tcttcattggc cttggacttg  
120  
gccagtctgg cctcgggtgcg ggcctttgcc actgcctttc tgagctctga gccacggttg  
180  
gacatcctca tccacaatgc cggatatcagt tcctgtggcc ggaccctga ggcgtttaac  
240  
ctgctgcttc gggatgaacca tatcggtccc tttctgctga cacatctgct gctgccttgc  
300  
ctgaaggcat gtgcccctag ccgcgtggtg gtggtagcct cagctgcca ctgtcgggga  
360  
cgtcttgact tcaaacgcct ggaccgcca gtggtgctgg cggcaggagc tgcggcatat  
420  
gctgacacta agctggctaa tgtactgttt gcccgaggagc tcgccaacca gcttgaggcc  
480  
actggcgtca cctgctatgc agcccaccca gggcctgtga actcggagct gttcctgcgc  
540  
catgttcctg gatggctgcg cccacttttg cgccattgg cttggctggt gccccggg  
598

&lt;210&gt; 3904

&lt;211&gt; 199

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3904

Ala	Arg	Arg	Gly	Ala	Arg	Val	Val	Leu	Ala	Cys	Arg	Ser	Gln	Glu	Arg				
1				5					10					15					
Gly	Glu	Ala	Ala	Ala	Phe	Asp	Leu	Arg	Gln	Glu	Ser	Gly	Asn	Asn	Glu				
		20					25					30							
Val	Ile	Phe	Met	Ala	Leu	Asp	Leu	Ala	Ser	Leu	Ala	Ser	Val	Arg	Ala				
	35					40				45									
Phe	Ala	Thr	Ala	Phe	Leu	Ser	Ser	Glu	Pro	Arg	Leu	Asp	Ile	Leu	Ile				
	50				55					60									
His	Asn	Ala	Gly	Ile	Ser	Ser	Cys	Gly	Arg	Thr	Arg	Glu	Ala	Phe	Asn				
65				70					75				80						
Leu	Leu	Leu	Arg	Val	Asn	His	Ile	Gly	Pro	Phe	Leu	Leu	Thr	His	Leu				

```
<210> 3905
<211> 370
<212> DNA
<213> Homo sapiens
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120
gccaccggcc agtttcgctg ccgcgtgccc ggcgccact tcttctcctt cacggctggc
180
aaggccccgc acaagagccc gtcggtgatg ctggtgcgaa accgcgacga ggtgcaggcg
240
ctggccttcg acgagcagcg gcggccaggc gcgcggcgcg cagccagcca gagcgccatg
300
ctgcagctcg actacggcga cacagtgtgg ctgcggctgc atggcgcccc gcagtacgcg
360
ctaggcgcg
370
```

```
<210> 3906
<211> 123
<212> PRT
<213> Homo sapiens
```

<400> 3906															
Gly	Ser	Ser	Glu	Leu	Arg	Ser	Ala	Phe	Ser	Ala	Ala	Arg	Thr	Thr	Pro
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Leu	Glu	Gly	Thr	Ser	Glu	Met	Ala	Val	Thr	Phe	Asp	Lys	Val	Tyr	Val
			20					25					30		
Asn	Ile	Gly	Gly	Asp	Phe	Asp	Val	Ala	Thr	Gly	Gln	Phe	Arg	Cys	Arg
		35					40					45			
Val	Pro	Gly	Ala	Tyr	Phe	Phe	Ser	Phe	Thr	Ala	Gly	Lys	Ala	Pro	His
	50					55					60				
Lys	Ser	Pro	Ser	Val	Met	Leu	Val	Arg	Asn	Arg	Asp	Glu	Val	Gln	Ala
65					70					75				80	
Leu	Ala	Phe	Asp	Glu	Gln	Arg	Arg	Pro	Gly	Ala	Arg	Arg	Ala	Ala	Ser

	85		90		95
Gln Ser Ala Met Leu Gln Leu Asp Tyr Gly Asp Thr Val Trp Leu Arg					
	100		105		110
Leu His Gly Ala Pro Gln Tyr Ala Leu Gly Ala					
	115		120		

&lt;210&gt; 3907

&lt;211&gt; 4474

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3907

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 60  
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 120  
 ccacaaagag ctgccaagat agctggggcca ggaagaaagc gccgcagccc tgaccagac  
 180  
 gctgttgccg accccggggc actctggctg tcgaccaagc ggctcaagat gtctggcggg  
 240  
 gccagtgcc aaggcccaag gagagggccc ccaggactgg aggacaccac tagtaagaag  
 300  
 aagcagaagg atcgagcaaa ccaggagagc aaggatggag atcctaggaa agagacaggg  
 360  
 tctcgatatg ttgcccaggc tggctctgaa cctctggcct caggtgatcc ttctgcctca  
 420  
 gcctcccatg cagctgggat cacaggctca cgccaccgta cccggctgtt ctttccttca  
 480  
 tcgtcagggc cagcatccac tcctcaagag gagcagacca aagagggagc ttgtgaagac  
 540  
 cctcatgatc tcttggttac tcccactcca gagttgttgc tcgattggag gcagagtgca  
 600  
 gaagaggtga ttgtcaagct tcgtgtggga gtaggtcccc tgcagctgga ggatgtagat  
 660  
 gctgctttca cagatacaga ctgtgtgggt cggtttgcag gtggtcagca gtgggggtgt  
 720  
 gtcttctatg ctgagataaa aagctcttgt gctaaagtgc aaaccgcga gggcagtctc  
 780  
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 840  
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 900  
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 960  
 ccagccatgg tccggagcag aaaccctggg aaagatgact gtgccaagga ggagatggca  
 1020  
 gtggcagcag atgctgcaac cttgggtgat ggtaaagagc ccgagtcgat ggtgaacctg  
 1080  
 gcgtttgtca agaagactc gtatgagaag ggcccggatt cagtgggtgt gcacgtgtac  
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 1200  
 atcttccaga ccagggatgg aaacttcctg aggtgcacc cgggctgtgg gccccacacc  
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1320  
ttcacggctt ctgcgacga catctgcctt cgtaagaggc agagtcagcg ctgggggggc  
1380  
ctggaggccc eggctgcacg agtgggtggt gcaaagggtg ccgtgccgac aggtccaacc  
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1620  
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2160  
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3180  
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4380  
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4474

&lt;210&gt; 3908

&lt;211&gt; 1373

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3908

Ala Gly Cys Gly Gly Leu Ala Arg Leu Ser Val Pro Cys Trp Arg Ile  
 1 5 10 15  
 Trp Pro Gln Arg Ala Ala Lys Ile Ala Gly Pro Gly Arg Lys Arg Arg  
 20 25 30  
 Ser Pro Asp Pro Asp Ala Val Ala Asp Pro Gly Ala Leu Trp Leu Ser  
 35 40 45  
 Thr Lys Arg Leu Lys Met Ser Gly Gly Ala Ser Ala Thr Gly Pro Arg  
 50 55 60  
 Arg Gly Pro Pro Gly Leu Glu Asp Thr Thr Ser Lys Lys Lys Gln Lys  
 65 70 75 80  
 Asp Arg Ala Asn Gln Glu Ser Lys Asp Gly Asp Pro Arg Lys Glu Thr  
 85 90 95  
 Gly Ser Arg Tyr Val Ala Gln Ala Gly Leu Glu Pro Leu Ala Ser Gly  
 100 105 110  
 Asp Pro Ser Ala Ser Ala Ser His Ala Ala Gly Ile Thr Gly Ser Arg  
 115 120 125  
 His Arg Thr Arg Leu Phe Phe Pro Ser Ser Ser Gly Ser Ala Ser Thr  
 130 135 140  
 Pro Gln Glu Glu Gln Thr Lys Glu Gly Ala Cys Glu Asp Pro His Asp  
 145 150 155 160  
 Leu Leu Ala Thr Pro Thr Pro Glu Leu Leu Leu Asp Trp Arg Gln Ser  
 165 170 175  
 Ala Glu Glu Val Ile Val Lys Leu Arg Val Gly Val Gly Pro Leu Gln  
 180 185 190  
 Leu Glu Asp Val Asp Ala Ala Phe Thr Asp Thr Asp Cys Val Val Arg  
 195 200 205  
 Phe Ala Gly Gly Gln Gln Trp Gly Gly Val Phe Tyr Ala Glu Ile Lys  
 210 215 220  
 Ser Ser Cys Ala Lys Val Gln Thr Arg Lys Gly Ser Leu Leu His Leu  
 225 230 235 240  
 Thr Leu Pro Lys Lys Val Pro Met Leu Thr Trp Pro Ser Leu Leu Val  
 245 250 255  
 Glu Ala Asp Glu Gln Leu Cys Ile Pro Pro Leu Asn Ser Gln Thr Cys  
 260 265 270  
 Leu Leu Gly Ser Glu Glu Asn Leu Ala Pro Leu Ala Gly Glu Lys Ala  
 275 280 285  
 Val Pro Pro Gly Asn Asp Pro Val Ser Pro Ala Met Val Arg Ser Arg  
 290 295 300  
 Asn Pro Gly Lys Asp Asp Cys Ala Lys Glu Glu Met Ala Val Ala Ala  
 305 310 315 320  
 Asp Ala Ala Thr Leu Val Asp Gly Lys Glu Pro Glu Ser Met Val Asn  
 325 330 335  
 Leu Ala Phe Val Lys Asn Asp Ser Tyr Glu Lys Gly Pro Asp Ser Val  
 340 345 350  
 Val Val His Val Tyr Val Lys Glu Ile Cys Arg Asp Thr Ser Arg Val  
 355 360 365  
 Leu Phe Arg Glu Gln Asp Phe Thr Leu Ile Phe Gln Thr Arg Asp Gly



370	375	380	
Asn Phe Leu Arg Leu His	Pro Gly Cys Gly	Pro His Thr Thr Phe Arg	
385	390	395	400
Trp Gln Val Lys Leu Arg	Asn Leu Ile Glu	Pro Glu Gln Cys Thr Phe	
	405	410	415
Cys Phe Thr Ala Ser Arg	Ile Asp Ile Cys Leu Arg	Lys Arg Gln Ser	
	420	425	430
Gln Arg Trp Gly Gly Leu	Glu Ala Pro Ala Ala Arg	Val Gly Gly Ala	
	435	440	445
Lys Val Ala Val Pro Thr	Gly Pro Thr Pro Leu Asp	Ser Thr Pro Pro	
	450	455	460
Gly Gly Ala Pro His Pro	Leu Thr Gly Gln Glu Glu	Ala Arg Ala Val	
465	470	475	480
Glu Lys Asp Lys Ser Lys	Ala Arg Ser Glu Asp Thr	Gly Leu Asp Ser	
	485	490	495
Val Ala Thr Arg Thr Pro	Met Glu His Val Thr Pro	Lys Pro Glu Thr	
	500	505	510
His Leu Ala Ser Pro Lys	Pro Thr Cys Met Val Pro	Pro Met Pro His	
	515	520	525
Ser Pro Val Ser Gly Asp	Ser Val Glu Glu Glu Glu	Glu Glu Lys	
	530	535	540
Lys Val Cys Leu Pro Gly	Phe Thr Gly Leu Val Asn	Leu Gly Asn Thr	
545	550	555	560
Cys Phe Met Asn Ser Val	Ile Gln Ser Leu Ser Asn	Thr Arg Glu Leu	
	565	570	575
Arg Asp Phe Phe His Asp	Arg Ser Phe Glu Ala Glu	Ile Asn Tyr Asn	
	580	585	590
Asn Pro Leu Gly Thr Gly	Gly Arg Leu Ala Ile Gly	Phe Ala Val Leu	
	595	600	605
Leu Arg Ala Leu Trp Lys	Gly Thr His His Ala Phe	Gln Pro Ser Lys	
	610	615	620
Leu Lys Ala Ile Val Ala	Ser Lys Ala Ser Gln Phe	Thr Gly Tyr Ala	
625	630	635	640
Gln His Asp Ala Gln Glu	Phe Met Ala Phe Leu Leu	Asp Gly Leu His	
	645	650	655
Glu Asp Leu Asn Arg Ile	Gln Asn Lys Pro Tyr Thr	Glu Thr Val Asp	
	660	665	670
Ser Asp Gly Arg Pro Asp	Glu Val Val Ala Glu Glu	Ala Trp Gln Arg	
	675	680	685
His Lys Met Arg Asn Asp	Ser Phe Ile Val Asp Leu	Phe Gln Gly Gln	
	690	695	700
Tyr Lys Ser Lys Leu Val	Cys Pro Val Cys Ala Lys	Val Ser Ile Thr	
705	710	715	720
Phe Asp Pro Phe Leu Tyr	Leu Pro Val Pro Leu Pro	Gln Lys Gln Lys	
	725	730	735
Val Leu Pro Val Phe Tyr	Phe Ala Arg Glu Pro His	Ser Lys Pro Ile	
	740	745	750
Lys Phe Leu Val Ser Val	Ser Lys Glu Asn Ser Thr	Ala Ser Glu Val	
	755	760	765
Leu Asp Ser Leu Ser Gln	Ser Val His Val Lys Pro	Glu Asn Leu Arg	
	770	775	780
Leu Ala Glu Val Ile Lys	Asn Arg Phe His Arg Val	Phe Leu Pro Ser	
785	790	795	800
His Ser Leu Asp Thr Val	Ser Pro Ser Asp Thr Leu	Leu Cys Phe Glu	



				805					810					815			
Leu	Leu	Ser	Ser	Glu	Leu	Ala	Lys	Glu	Arg	Val	Val	Val	Leu	Glu	Val		
			820					825					830				
Gln	Gln	Arg	Pro	Gln	Val	Pro	Ser	Val	Pro	Ile	Ser	Lys	Cys	Ala	Ala		
		835						840					845				
Cys	Gln	Arg	Lys	Gln	Gln	Ser	Glu	Asp	Glu	Lys	Leu	Lys	Arg	Cys	Thr		
	850					855					860						
Arg	Cys	Tyr	Arg	Val	Gly	Tyr	Cys	Asn	Gln	Leu	Cys	Gln	Lys	Thr	His		
865					870					875					880		
Trp	Pro	Asp	His	Lys	Gly	Leu	Cys	Arg	Pro	Glu	Asn	Ile	Gly	Tyr	Pro		
			885					890					895				
Phe	Leu	Val	Ser	Val	Pro	Ala	Ser	Arg	Leu	Thr	Tyr	Ala	Arg	Leu	Ala		
		900						905					910				
Gln	Leu	Leu	Glu	Gly	Tyr	Ala	Arg	Tyr	Ser	Val	Ser	Val	Phe	Gln	Pro		
	915						920					925					
Pro	Phe	Gln	Pro	Gly	Arg	Met	Ala	Leu	Glu	Ser	Gln	Ser	Pro	Gly	Cys		
	930					935					940						
Thr	Thr	Leu	Leu	Ser	Thr	Gly	Ser	Leu	Glu	Ala	Gly	Asp	Ser	Glu	Arg		
945					950					955					960		
Asp	Pro	Ile	Gln	Pro	Pro	Glu	Leu	Gln	Leu	Val	Thr	Pro	Met	Ala	Glu		
			965					970						975			
Gly	Asp	Thr	Gly	Leu	Pro	Arg	Val	Trp	Ala	Ala	Pro	Asp	Arg	Gly	Pro		
		980					985						990				
Val	Pro	Ser	Thr	Ser	Gly	Ile	Ser	Ser	Glu	Met	Leu	Ala	Ser	Gly	Pro		
	995					1000						1005					
Ile	Glu	Val	Gly	Ser	Leu	Pro	Ala	Gly	Glu	Arg	Val	Ser	Arg	Pro	Glu		
	1010					1015						1020					
Ala	Ala	Val	Pro	Gly	Tyr	Gln	His	Pro	Ser	Glu	Ala	Met	Asn	Ala	His		
1025					1030					1035					1040		
Thr	Pro	Gln	Phe	Phe	Ile	Tyr	Lys	Ile	Asp	Ser	Ser	Asn	Arg	Glu	Gln		
			1045					1050					1055				
Arg	Leu	Glu	Asp	Lys	Gly	Asp	Thr	Pro	Leu	Glu	Leu	Gly	Asp	Asp	Cys		
		1060						1065					1070				
Ser	Leu	Ala	Leu	Val	Trp	Arg	Asn	Asn	Glu	Arg	Leu	Gln	Glu	Phe	Val		
	1075					1080						1085					
Leu	Val	Ala	Ser	Lys	Glu	Leu	Glu	Cys	Ala	Glu	Asp	Pro	Gly	Ser	Ala		
	1090					1095						1100					
Gly	Glu	Ala	Ala	Arg	Ala	Gly	His	Phe	Thr	Leu	Asp	Gln	Cys	Leu	Asn		
1105					1110					1115					1120		
Leu	Phe	Thr	Arg	Pro	Glu	Val	Leu	Ala	Pro	Glu	Glu	Ala	Trp	Tyr	Cys		
			1125					1130					1135				
Pro	Gln	Cys	Lys	Gln	His	Arg	Glu	Ala	Ser	Lys	Gln	Leu	Leu	Leu	Trp		
		1140						1145				1150					
Arg	Leu	Pro	Asn	Val	Leu	Ile	Val	Gln	Leu	Lys	Arg	Phe	Ser	Phe	Arg		
	1155					1160						1165					
Ser	Phe	Ile	Trp	Arg	Asp	Lys	Ile	Asn	Asp	Leu	Val	Glu	Phe	Pro	Val		
	1170					1175						1180					
Arg	Asn	Leu	Asp	Leu	Ser	Lys	Phe	Cys	Ile	Gly	Gln	Lys	Glu	Glu	Gln		
1185					1190					1195					1200		
Leu	Pro	Ser	Tyr	Asp	Leu	Tyr	Ala	Val	Ile	Asn	His	Tyr	Gly	Gly	Met		
			1205					1210					1215				
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&lt;400&gt; 3909

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Cys Arg Ser Arg Glu Gly Gly Tyr Thr Cys Leu Cys Arg Asp Gly Tyr		780
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Gly Val Cys Lys Asn Gly Gly Thr Cys Val Asn Leu Leu Val Gly Gly		815
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Phe Lys Cys Asp Cys Pro Ser Gly Asp Phe Glu Lys Pro Tyr Cys Gln		830
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Val Thr Thr Arg Ser Phe Pro Ala His Ser Phe Ile Thr Phe Arg Gly		845
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Leu Arg Gln Arg Phe His Phe Thr Leu Ala Leu Ser Phe Ala Thr Lys		860
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Glu Arg Asp Gly Leu Leu Leu Tyr Asn Gly Arg Phe Asn Glu Lys His		880
	885	890
Asp Phe Val Ala Leu Glu Val Ile Gln Glu Gln Val Gln Leu Thr Phe		895
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Ser Ala Gly Glu Ser Thr Thr Thr Val Ser Pro Phe Val Pro Gly Gly		910
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Pro Leu Leu Gly Gln Thr Gly Leu Pro Gln Gly Pro Ser Glu Gln Lys		940
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Phe Gly Ser Val Leu Gly Asn Tyr Ser Cys Ala Ala Gln Gly Thr Gln		975
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Ala Asp Phe Ile Ala Asn Asn Gly Thr Val Pro Gly Cys Pro Ala Lys		1040
	1045	1050
Lys Asn Val Cys Asp Ser Asn Thr Cys His Asn Gly Gly Thr Cys Val		1055
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Lys Ser Cys Ala Gln Glu Met Ala Asn Pro Gln His Phe Leu Gly Ser		1085
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Ser Leu Val Ala Trp His Gly Leu Ser Leu Pro Ile Ser Gln Pro Trp		1100
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Tyr Leu Ser Leu Met Phe Arg Thr Arg Gln Ala Asp Gly Val Leu Leu		1120



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Glu Ser Ile Asn Val Glu Gln Gly Cys Ser Leu Pro Asp Pro Cys Asp		
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Ser Asn Pro Cys Pro Ala Asn Ser Tyr Cys Ser Asn Asp Trp Asp Ser		1280
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Pro Ser Ala Pro His Gly Tyr Thr Cys Glu Cys Pro Pro Asn Tyr Leu		
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Trp Gly His Pro Thr Cys Gly Pro Cys Asn Cys Asp Val Ser Lys Gly		1360
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Ser Cys Pro Arg Ala Ile Glu Ala Gly Ile Trp Trp Pro Arg Thr Arg		
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<211> 1435

<212> PRT

<213> Homo sapiens

<400> 3914

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Arg	Leu	Asn	His	Leu	Ser	Phe	Ala	Glu	Leu	Leu	Lys	Pro	Phe	Ser	Arg
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Leu	Thr	Ser	Glu	Val	His	Met	Arg	Asp	Pro	Asn	Asn	Gln	Leu	His	Val
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Ile	Lys	Asn	Leu	Lys	Ile	Ala	Val	Ser	Asn	Ile	Val	Thr	Gln	Pro	Pro
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Gln	Pro	Gly	Ala	Ile	Arg	Lys	Leu	Leu	Asn	Asp	Val	Val	Ser	Gly	Ser
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Gln	Pro	Ala	Glu	Gly	Leu	Val	Ala	Asn	Val	Ile	Thr	Ala	Gly	Asp	Tyr
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Asp	Leu	Asn	Ile	Ser	Ala	Thr	Thr	Pro	Trp	Phe	Glu	Ser	Tyr	Arg	Glu
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Thr	Phe	Leu	Gln	Ser	Met	Pro	Ala	Ser	Asp	His	Glu	Phe	Leu	Asn	His
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Tyr	Leu	Ala	Cys	Met	Leu	Val	Ala	Ser	Ser	Ser	Glu	Ala	Glu	Pro	Val
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Glu	Gln	Phe	Ser	Lys	Leu	Ser	Gln	Glu	Gln	His	Arg	Ile	Gln	His	Asn
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Ser	Asp	Tyr	Ser	Tyr	Pro	Lys	Trp	Phe	Ile	Pro	Asn	Thr	Leu	Lys	Tyr
		180					185						190		
Tyr	Val	Leu	Leu	His	Asp	Val	Ser	Ala	Gly	Asp	Glu	Gln	Arg	Ala	Glu
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Ser	Ile	Tyr	Glu	Glu	Met	Lys	Gln	Lys	Tyr	Gly	Thr	Gln	Gly	Cys	Tyr



210	215	220
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Gln Glu Ser Tyr Glu Asp Gly Pro Cys Thr Ile Thr Ser Asn Lys Asn		255
	260	265
Ser Asp Asn Asn Leu Leu Ser Leu Asp Gly Leu Asp Asn Glu Val Lys		270
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Asp Gly Leu Pro Asn Asn Phe Arg Ala His Pro Leu Gln Leu Glu Gln		285
	290	295
Ser Ser Asp Pro Ser Asn Ser Ile Asp Gly Pro Asp His Leu Arg Ser		300
305	310	315
Ala Ser Ser Leu His Glu Thr Lys Lys Gly Asn Thr Gly Ile Ile His		320
	325	330
Gly Ala Cys Leu Thr Leu Thr Asp His Asp Arg Ile Arg Gln Phe Ile		335
	340	345
Gln Lys Phe Thr Phe Arg Gly Leu Leu Pro His Ile Glu Lys Thr Ile		350
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Arg Gln Leu Asn Asp Gln Leu Ile Ser Arg Lys Gly Leu Ser Arg Ser		365
	370	375
Leu Phe Ser Ala Thr Lys Lys Trp Phe Ser Gly Ser Lys Val Pro Glu		380
385	390	395
Lys Ser Ile Asn Asp Leu Lys Asn Thr Ser Gly Leu Leu Tyr Pro Pro		400
	405	410
Glu Ala Pro Glu Leu Gln Ile Arg Lys Met Ala Asp Leu Cys Phe Leu		415
	420	425
Val Gln His Tyr Asp Leu Ala Tyr Ser Cys Tyr His Thr Ala Lys Lys		430
	435	440
Asp Phe Leu Asn Asp Gln Ala Met Leu Tyr Ala Ala Gly Ala Leu Glu		445
	450	455
Met Ala Ala Val Ser Ala Phe Leu Gln Pro Gly Ala Pro Arg Pro Tyr		460
465	470	475
Pro Ala His Tyr Met Asp Thr Ala Ile Gln Thr Tyr Arg Asp Ile Cys		480
	485	490
Lys Asn Met Val Leu Ala Glu Arg Cys Val Leu Leu Ser Ala Glu Leu		495
	500	505
Leu Lys Ser Gln Ser Lys Tyr Ser Glu Ala Ala Ala Leu Leu Ile Arg		510
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Ala Ala His Cys Phe Ile Asn Met Lys Ser Pro Met Val Arg Lys Tyr		540
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Ala Phe His Met Ile Leu Ala Gly His Arg Phe Ser Lys Ala Gly Gln		560
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Lys Lys His Ala Leu Arg Cys Tyr Cys Gln Ala Met Gln Val Tyr Lys		575
	580	585
Gly Lys Gly Trp Ser Leu Ala Glu Asp His Ile Asn Phe Thr Ile Gly		590
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Arg Gln Ser Tyr Thr Leu Arg Gln Leu Asp Asn Ala Val Ser Ala Phe		605
	610	615
Arg His Ile Leu Ile Asn Glu Ser Lys Gln Ser Ala Ala Gln Gln Gly		620
625	630	635
Ala Phe Leu Arg Glu Tyr Leu Tyr Val Tyr Lys Asn Val Ser Gln Leu		640



3076

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Val Asp Val Glu Asn Thr Asn Thr Ser Glu Ala Gly Val Lys Glu Phe  
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His Ile Val Gln Val Ser Ser Ser Ser Lys His Trp Lys Leu Gln Lys  
1125 1130 1135  
Ser Val Asn Leu Ser Glu Asn Lys Asp Ala Lys Leu Ala Ser Arg Glu  
1140 1145 1150  
Lys Gly Lys Phe Cys Phe Lys Ala Ile Arg Cys Glu Lys Glu Glu Ala  
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1170 1175 1180  
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Val Glu Asp Ser Lys Gln Leu Ile Leu Glu Gly Gln His His Val Ile  
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&lt;210&gt; 3915

&lt;211&gt; 1802

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3915

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 1802

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 <211> 342  
 <212> PRT  
 <213> Homo sapiens

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 50 55 60  
 Ser Trp Arg Tyr Glu Glu Thr Ser Glu Asn Glu Ala Val Ala Glu Glu  
 65 70 75 80  
 Glu Glu Glu Glu Val Glu Glu Glu Gly Glu Asp Val Phe Thr Glu  
 85 90 95  
 Lys Ala Ser Pro Asp Met Asp Gly Tyr Pro Ala Leu Lys Val Asp Lys  
 100 105 110  
 Glu Thr Asn Thr Glu Thr Pro Ala Pro Ser Pro Thr Val Val Arg Pro  
 115 120 125  
 Lys Asp Arg Arg Val Gly Thr Pro Ser Gln Gly Pro Phe Leu Arg Gly  
 130 135 140  
 Ser Thr Ile Ile Arg Ser Lys Thr Phe Ser Pro Gly Pro Gln Ser Gln  
 145 150 155 160  
 Tyr Val Cys Arg Leu Asn Arg Ser Asp Ser Asp Ser Ser Thr Leu Ser  
 165 170 175  
 Lys Lys Pro Pro Phe Val Arg Asn Ser Leu Glu Arg Arg Ser Val Arg  
 180 185 190  
 Met Lys Arg Pro Ser Pro Pro Pro Gln Pro Ser Ser Val Lys Ser Leu  
 195 200 205  
 Arg Ser Glu Arg Leu Ile Arg Thr Ser Leu Asp Leu Glu Leu Asp Leu  
 210 215 220  
 Gln Ala Thr Arg Thr Trp His Ser Gln Leu Thr Gln Glu Ile Ser Val  
 225 230 235 240  
 Leu Lys Glu Leu Lys Glu Gln Leu Glu Gln Ala Lys Ser His Gly Glu  
 245 250 255  
 Lys Glu Leu Pro Gln Trp Leu Arg Glu Asp Glu Arg Phe Arg Leu Leu  
 260 265 270  
 Leu Arg Met Leu Glu Lys Arg Gln Met Asp Arg Ala Glu His Lys Gly  
 275 280 285  
 Glu Leu Gln Thr Asp Lys Met Met Arg Ala Ala Ala Lys Asp Val His  
 290 295 300  
 Arg Leu Arg Gly Gln Ser Cys Lys Glu Pro Pro Glu Val Gln Ser Phe  
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330

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<210> 3917  
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<212> DNA  
<213> Homo sapiens

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<213> Homo sapiens

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35 40 45  
Met Glu Glu Val Leu Leu Leu Gly Leu Lys Asp Lys Glu Gly Tyr Thr  
50 55 60  
Ser Phe Trp Asn Asp Cys Ile Ser Ser Gly Leu Arg Gly Gly Ile Leu  
65 70 75 80  
Ile Glu Leu Ala Met Arg Gly Arg Ile Tyr Leu Glu Pro Pro Thr Met  
85 90 95  
Arg Lys Lys Arg Leu Leu Asp Arg Lys Val Leu Leu Lys Ser Asp Ser  
100 105 110  
Pro Thr Gly Asp Val Leu Leu Asp Glu Thr Leu Lys His Ile Lys Ala  
115 120 125  
Thr Glu Pro Thr Glu Thr Val Gln Thr Trp Ile Glu Leu Leu Thr Gly

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<210> 3919  
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<212> DNA  
<213> Homo sapiens

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660  
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720  
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780  
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&lt;210&gt; 3920

&lt;211&gt; 426

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3920

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 Leu Thr Gln Glu Arg Asp Tyr Leu Gln Ala Gln His Pro Pro Ser Pro  
 35 40 45  
 Ile Lys Ser Ser Ser Ala Asp Ser Thr Pro Ser Pro Thr Ser Ser Leu  
 50 55 60  
 Ser Ser Glu Asp Lys Gln His Leu Ala Val Glu Leu Ala Asp Thr Lys  
 65 70 75 80  
 Ala Arg Leu Arg Arg Val Arg Gln Glu Leu Glu Asp Lys Thr Glu Gln  
 85 90 95  
 Leu Val Asp Thr Arg His Glu Val Asp Gln Leu Val Leu Glu Leu Gln  
 100 105 110  
 Lys Val Lys Gln Glu Asn Ile Gln Leu Ala Ala Asp Ala Arg Ser Ala  
 115 120 125  
 Arg Ala Tyr Arg Asp Glu Leu Asp Ser Leu Arg Glu Lys Ala Asn Arg  
 130 135 140  
 Val Glu Arg Leu Glu Leu Glu Leu Thr Arg Cys Lys Glu Lys Leu His  
 145 150 155 160  
 Asp Val Asp Phe Tyr Lys Ala Arg Met Glu Glu Leu Arg Glu Asp Asn  
 165 170 175  
 Ile Ile Leu Ile Glu Thr Lys Ala Met Leu Glu Glu Gln Leu Thr Ala  
 180 185 190  
 Ala Arg Ala Arg Gly Asp Lys Val His Glu Leu Glu Lys Glu Asn Leu  
 195 200 205  
 Gln Leu Lys Ser Lys Leu His Asp Leu Glu Leu Asp Arg Asp Thr Asp  
 210 215 220  
 Lys Lys Arg Ile Glu Glu Leu Leu Glu Glu Asn Met Val Leu Glu Ile  
 225 230 235 240  
 Ala Gln Lys Gln Ser Met Asn Glu Ser Ala His Leu Gly Trp Glu Leu  
 245 250 255  
 Glu Gln Leu Ser Lys Asn Ala Asp Leu Ser Asp Ala Ser Arg Lys Ser  
 260 265 270  
 Phe Val Phe Glu Leu Asn Glu Cys Ala Ser Ser Arg Ile Leu Lys Leu  
 275 280 285  
 Glu Lys Glu Asn Gln Ser Leu Gln Ser Thr Ile Gln Gly Leu Arg Asp  
 290 295 300  
 Ala Ser Leu Val Leu Glu Ser Gly Leu Lys Cys Gly Glu Leu Glu  
 305 310 315 320  
 Lys Glu Asn His Gln Leu Ser Lys Lys Ile Glu Lys Leu Gln Thr Gln  
 325 330 335  
 Leu Glu Arg Glu Lys Gln Ser Asn Gln Asp Leu Glu Thr Leu Ser Glu  
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 Glu Leu Ile Arg Glu Lys Glu Gln Leu Gln Ser Asp Met Glu Thr Leu  
 355 360 365  
 Lys Ala Asp Lys Ala Arg Gln Ile Lys Asp Leu Glu Gln Glu Lys Asp



370	375	380
His Leu Asn Arg Ala Met Trp Ser Leu Arg Glu Arg Ser Gln Val Ser		
385	390	395
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Gln Thr Val Thr Glu Ala Asn Gly Lys Leu		415
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<210> 3921  
 <211> 413  
 <212> DNA  
 <213> Homo sapiens

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35 40 45
Asp Ser Val Gly Pro Ile Pro Ala Pro Arg Gly Asp Gly Cys Cys Arg
50 55 60
Asp Val Gln Ala Val Glu Gly Ser Arg Glu Trp Ala Trp Arg Ser Ala
65 70 75 80
Ser Leu Ala Pro Leu Leu Asp Ala Phe Leu Gln Pro Leu Glu Leu Arg
85 90 95
Gln Cys Ser Val Arg Met Ile Ile Gly Phe Pro Pro Gln Phe Leu Ala
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His Ser Phe Val Ala Leu Val Thr Ala Phe Cys Asp Asn Ile
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<210> 3923  
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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3923

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&lt;210&gt; 3924

&lt;211&gt; 250

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3924

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Lys	Pro	Leu	Val	Ala	Val	Asn	Thr	Arg	Leu	Ser	Gly	Gly	Gln	Val	Leu
			20					25					30		
Ser	Glu	Tyr	Thr	Gly	Pro	Thr	Ser	Ala	Asp	Leu	Asp	His	Phe	Pro	Ser
		35					40					45			
Val	Ser	Gln	Thr	Lys	Ala	Glu	Gln	Asp	Ser	Asp	Asn	Lys	Ser	Ser	Thr
		50				55					60				
Glu	Ile	Pro	Leu	Glu	Thr	Cys	Cys	Ser	Ser	Glu	Leu	Lys	Gly	Gly	Gly
65				70						75				80	
Ser	Gly	Thr	Ser	Leu	Glu	Arg	Glu	Gln	Phe	Glu	Gly	Leu	Gly	Ser	Thr
			85					90					95		
Pro	Asp	Ala	Lys	Leu	Asp	Lys	Thr	Cys	Ile	Ser	Arg	Ala	Met	Lys	Ile
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<210> 3925
<211> 3296
<212> DNA
<213> Homo sapiens
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<211> 683

<212> PRT

<213> Homo sapiens

<400> 3926

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			20					25					30		
Thr	Arg	Pro	Gln	Pro	Val	Leu	Pro	Leu	Leu	Asp	Leu	Asn	Asn	Gln	Ser
		35					40					45			
Val	Gly	Ile	Glu	Gly	Gly	Ala	Arg	Lys	Gly	Val	Ser	Gln	Lys	Asn	Asn
	50					55					60				
Asp	Leu	Thr	Ser	Cys	Cys	Phe	Ser	Asp	Ala	Lys	Thr	Met	Tyr	Glu	Val
65					70					75				80	
Phe	Gln	Arg	Gly	Leu	Ala	Val	Ser	Asp	Asn	Gly	Pro	Cys	Leu	Gly	Tyr
			85					90					95		
Arg	Lys	Pro	Asn	Gln	Pro	Tyr	Arg	Trp	Leu	Ser	Tyr	Lys	Gln	Val	Ser
			100					105					110		
Asp	Arg	Ala	Glu	Tyr	Leu	Gly	Ser	Cys	Leu	Leu	His	Lys	Gly	Tyr	Lys
		115				120						125			
Ser	Ser	Pro	Asp	Gln	Phe	Val	Gly	Ile	Phe	Ala	Gln	Asn	Arg	Pro	Glu
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Trp	Ile	Ile	Ser	Glu	Leu	Ala	Cys	Tyr	Thr	Tyr	Ser	Met	Val	Ala	Val
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Pro	Leu	Tyr	Asp	Thr	Leu	Gly	Pro	Glu	Ala	Ile	Val	His	Ile	Val	Asn

3088



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Leu	Cys	Gln	Asn	Gln	Val	Val	Arg	Glu	Ala	Ile	Leu	Glu	Asp	Leu	Gln
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Lys	Ile	Gly	Lys	Glu	Ser	Gly	Leu	Lys	Thr	Phe	Glu	Gln	Val	Lys	Ala
625					630					635					640
Ile	Phe	Leu	His	Pro	Glu	Pro	Phe	Ser	Ile	Glu	Asn	Gly	Leu	Leu	Thr
			645						650					655	
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&lt;210&gt; 3927

&lt;211&gt; 3197

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3927

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 <211> 180  
 <212> PRT  
 <213> Homo sapiens

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 Ile Leu Gly Val Cys Pro Val Ser Pro Gly Ala Leu Ser Tyr Met Glu  
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 Ser Pro Thr Gly Phe Trp Arg Pro Arg Glu Ala Ser Ser Leu Glu Leu  
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 Ala Lys Gly Ile Ser Lys Arg Arg His Phe Leu Pro Ala Pro Ala Leu  
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 Thr Leu Ala Ile  
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<210> 3929  
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 <212> DNA  
 <213> Homo sapiens

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&lt;210&gt; 3930

&lt;211&gt; 115

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3930

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			20					25					30		
Gln	Ser	Glu	Asn	Glu	Ala	Ser	Pro	Val	Lys	Arg	Pro	Arg	Leu	Leu	Glu
	35						40					45			
Asn	Thr	Glu	Arg	Ser	Glu	Glu	Thr	Ser	Arg	Ser	Lys	Gln	Lys	Ser	Arg
	50					55					60				
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&lt;210&gt; 3931

&lt;211&gt; 3568

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3931

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&lt;210&gt; 3932

&lt;211&gt; 293

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3932

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&lt;210&gt; 3933

&lt;211&gt; 4082



&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3933

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&lt;211&gt; 130

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3934

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<213> Homo sapiens

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<212> DNA

<213> Homo sapiens

<400> 3937

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300

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 420  
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<210> 3938

<211> 154

<212> PRT

<213> Homo sapiens

<400> 3938

Pro	Pro	Ala	Gly	Ala	Ala	Phe	Ala	Ala	Asn	His	Pro	Val	Leu	Pro	Pro
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Gly	His	Val	Leu	Leu	Ala	Glu	Asn	Ala	Asp	Leu	Ser	Arg	Asn	Ala	Gly
			20					25					30		
Arg	Arg	Gly	Trp	Arg	Gly	Leu	Arg	Ala	Pro	Arg	Tyr	Arg	Asp	Pro	Gly
		35				40						45			
Arg	Ala	Ala	Glu	Ala	Gly	Asn	Ala	Lys	Gly	Asp	Ala	Thr	Ala	Gly	Pro
	50					55				60					
Lys	Glu	Gln	Gly	Gly	Gly	Gly	Gln	Asp	Pro	Ala	Ala	Ile	Ala	Gly	His
65				70						75				80	
Ser	Ala	Gly	Gly	Ser	Asp	His	Ala	Gly	Glu	Arg	Gly	Leu	Xaa	Gly	Arg
			85					90						95	
Thr	Gly	Trp	Leu	Ala	Ala	Lys	Ala	Ala	Pro	Ala	Gly	Gly	His	Arg	Glu
			100					105					110		
Thr	Gly	Leu	Ala	Ser	Val	Gly	Ala	Gly	Pro	Trp	Leu	Gly	Arg	Arg	Asn
	115					120						125			
Pro	Arg	Gln	Pro	Phe	Ser	Phe	Val	Gly	Pro	Ala	Glu	Ser	Pro	Asp	Arg
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<210> 3939

<211> 490

<212> DNA

<213> Homo sapiens

<400> 3939

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 taaggaaccc acggtgcgga ggtgtcagga ggaaggtagc agcgtcttga ctttccaccg  
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 490

<210> 3940  
 <211> 62  
 <212> PRT  
 <213> Homo sapiens

<400> 3940  
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 35 40 45  
 Thr Asp Ser Glu Gly Gly Arg Asp Arg Leu Glu Pro Phe Leu  
 50 55 60

<210> 3941  
 <211> 2077  
 <212> DNA  
 <213> Homo sapiens

<400> 3941  
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 120  
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 180  
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 240  
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 420  
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 480  
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720  
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780  
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1140  
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1320  
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1980  
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2040  
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2077

&lt;210&gt; 3942



<211> 89  
 <212> PRT  
 <213> Homo sapiens

<400> 3942  
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 20 25 30  
 Gln Glu Arg Leu Arg Leu Thr Arg Gly Trp Ser Pro Gln Gly Gly Cys  
 35 40 45  
 Gly Ala Arg Ser Gln Ser Thr Pro Ser Ser Asp Thr Leu Pro Pro Ala  
 50 55 60  
 Leu Leu Gly Ser Pro Ala Ser Val Ser Gly Thr Gly Gly Thr Asp Met  
 65 70 75 80  
 Ser Ser Ala Asn Ala His Ser Ala Leu  
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<210> 3943  
 <211> 1524  
 <212> DNA  
 <213> Homo sapiens

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 120  
 ggggaagccgc agccgcagga cgaggacgac gcggaggagg aggaggagga ggatgagctg  
 180  
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 240  
 acagaggagg gagttctgga cttcagtac cccttcagca ctgaagtga gccgagaatc  
 300  
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 360  
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 420  
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 480  
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 540  
 gacgcacagg atgactacat ggaggcttta acaagacttc acattactgt ttctaaagcc  
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 720  
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 780  
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 900

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 960  
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 1080  
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 1140  
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 1200  
 gaagtttttg aggtgagaat gaaagtagta aaatctcgaa aggttcagaa tcggctgcag  
 1260  
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 1380  
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&lt;210&gt; 3944

&lt;211&gt; 435

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3944

Ser	Arg	Gln	Lys	Ser	Ala	Ser	Glu	Ile	Gly	Cys	Gly	Arg	Pro	Ala	Arg
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Arg	Leu	Gly	Pro	Thr	Pro	Gly	Pro	Pro	Pro	Ser	Pro	Gly	Arg	Pro	Ala
			20					25					30		
Val	Gly	Thr	Met	Ser	Gln	Val	Leu	Gly	Lys	Pro	Gln	Pro	Gln	Asp	Glu
		35					40				45				
Asp	Asp	Ala	Glu	Glu	Glu	Glu	Glu	Glu	Asp	Glu	Leu	Val	Gly	Leu	Ala
	50					55				60					
Asp	Tyr	Gly	Asp	Gly	Pro	Asp	Ser	Ser	Asp	Ala	Asp	Pro	Asp	Ser	Gly
65					70				75					80	
Thr	Glu	Glu	Gly	Val	Leu	Asp	Phe	Ser	Asp	Pro	Phe	Ser	Thr	Glu	Val
				85					90					95	
Lys	Pro	Arg	Ile	Leu	Leu	Met	Gly	Leu	Arg	Arg	Ser	Gly	Lys	Ser	Ser
			100				105						110		
Ile	Gln	Lys	Val	Val	Phe	His	Lys	Met	Ser	Pro	Asn	Glu	Thr	Leu	Phe
	115						120					125			
Leu	Glu	Ser	Thr	Asn	Lys	Ile	Cys	Arg	Glu	Asp	Val	Ser	Asn	Ser	Ser
	130				135						140				
Phe	Val	Asn	Phe	Gln	Ile	Trp	Asp	Phe	Pro	Gly	Gln	Ile	Asp	Phe	Phe
145				150					155					160	
Asp	Pro	Thr	Phe	Asp	Tyr	Glu	Met	Ile	Phe	Arg	Gly	Thr	Gly	Ala	Leu
			165					170						175	
Ile	Phe	Val	Ile	Asp	Ala	Gln	Asp	Asp	Tyr	Met	Glu	Ala	Leu	Thr	Arg
		180					185					190			
Leu	His	Ile	Thr	Val	Ser	Lys	Ala	Tyr	Lys	Val	Asn	Pro	Asp	Met	Asn

195	200	205
Phe Glu Val Phe Ile His Lys Val Asp Gly Leu Ser Asp Asp His Lys		
210	215	220
Ile Glu Thr Gln Arg Asp Ile His Gln Arg Ala Asn Asp Asp Leu Ala		
225	230	235
Asp Ala Gly Leu Glu Lys Ile His Leu Ser Phe Tyr Leu Thr Ser Ile		240
	245	250
Tyr Asp His Ser Ile Phe Glu Ala Phe Ser Lys Val Val Gln Lys Leu		255
	260	265
Ile Pro Gln Leu Pro Thr Leu Glu Asn Leu Leu Asn Ile Phe Ile Ser		270
	275	280
Asn Ser Gly Ile Glu Lys Ala Phe Leu Phe Asp Val Val Ser Lys Ile		285
	290	295
Tyr Ile Ala Thr Asp Ser Thr Pro Val Asp Met Gln Thr Tyr Glu Leu		300
305	310	315
Cys Cys Asp Met Ile Asp Val Val Ile Asp Ile Ser Cys Ile Tyr Gly		320
	325	330
Leu Lys Glu Asp Gly Ala Gly Thr Pro Tyr Asp Lys Glu Ser Thr Ala		335
	340	345
Ile Ile Lys Leu Asn Asn Thr Thr Val Leu Tyr Leu Lys Glu Val Thr		350
	355	360
Lys Phe Leu Ala Leu Val Cys Phe Val Arg Glu Glu Ser Phe Glu Arg		365
	370	375
Lys Gly Leu Ile Asp Tyr Asn Phe His Cys Phe Arg Lys Ala Ile His		380
385	390	395
Glu Val Phe Glu Val Arg Met Lys Val Val Lys Ser Arg Lys Val Gln		400
	405	410
Asn Arg Leu Gln Lys Lys Lys Arg Ala Thr Pro Asn Gly Thr Pro Arg		415
	420	425
Val Leu Leu		430
435		

&lt;210&gt; 3945

&lt;211&gt; 696

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3945

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60

agccgagagt ggatcgctgg gctgggctaa cggcgacgga gagcgcgccc tcgctgactc

120

cgggcgcgcc cagcagtagc accgcccgcg cccgcccctg gacacttgta agtttcgatt

180

tccgatttcc gcggaaccga gtcccgcgcc gcggcagagc cagcacagcc agcgcgccat

240

ggcggacccg gaggtgtgct gcttcatcac caaaatcctg tgcgcccacg ggggcccgc

300

ggccctggac gcgctgctcc aggagatcgc gctgtctgag ccgcagctct gtgaggtgct

360

gcaggtggcc gggcccagacc gctttgtggt gttggagacc ggcggcgagg ccgggatcac

420

ccgatcggtg gtggccacca ctcgagcccg ggtctgccgt cgcaagtact gccagagacc

480

ctgcgataac ctgcatctct gcaaactcaa cttgctgggc cgggtgcaact attcgcagtc  
 540  
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 600  
 gaaaaatcac gaactctctg gactgaacaa agaggaatta gcagtgtctc tcctccaaag  
 660  
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 696

<210> 3946

<211> 165

<212> PRT

<213> Homo sapiens

<400> 3946

Met	Gln	Val	Ile	Ala	Gly	Ser	Leu	Ala	Val	Leu	Ala	Thr	Ala	Asp	Pro
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Gly	Ser	Ser	Gly	Gly	His	His	Arg	Ser	Gly	Asp	Pro	Gly	Leu	Ala	Ala
			20					25					30		
Gly	Leu	Gln	His	His	Lys	Ala	Val	Gly	Pro	Gly	His	Leu	Gln	His	Leu
			35				40					45			
Thr	Glu	Leu	Arg	Leu	Arg	Gln	Arg	Asp	Leu	Leu	Glu	Gln	Arg	Val	Gln
	50					55					60				
Gly	His	Ala	Ala	Pro	Val	Gly	Ala	Gln	Asp	Phe	Gly	Asp	Glu	Ala	Ala
65					70					75				80	
His	Leu	Arg	Val	Arg	His	Gly	Ala	Leu	Ala	Val	Leu	Ala	Leu	Pro	Arg
				85					90					95	
Arg	Gly	Thr	Arg	Phe	Arg	Gly	Asn	Arg	Lys	Ser	Lys	Leu	Thr	Ser	Val
			100					105					110		
Gln	Gly	Arg	Ala	Arg	Ala	Val	Leu	Leu	Leu	Gly	Ala	Pro	Gly	Val	Ser
			115				120					125			
Glu	Gly	Ala	Leu	Ser	Val	Ala	Val	Ser	Pro	Ala	Gln	Arg	Ser	Thr	Leu
	130					135					140				
Gly	Ser	Gln	Val	Lys	Arg	Leu	Asp	Leu	Thr	Asp	Arg	Val	Leu	Val	Ala
145					150					155					160
Gly	Leu	Gln	Pro	Ala											
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<210> 3947

<211> 400

<212> DNA

<213> Homo sapiens

<400> 3947

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 120  
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 180  
 gccagcgagc aggtaatcaa agacctaaag ggctcggact acagctggtc ctaccagacc  
 240  
 ccacctcat caccagcag ctccagctcc cggaagtcca gcatgtgcag tgccccagc  
 300

agcagtagca gtgccaaggg tggcggaagc cccatggcct gggggtgccc aaacatactc  
 360  
 acccagttcc acctgtcgct accgcagcct ggcgcagcca  
 400

<210> 3948  
 <211> 133  
 <212> PRT  
 <213> Homo sapiens

<400> 3948  
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 20 25 30  
 Thr Met Leu Gly Glu Ile Thr His Leu Gln Gly Ile Ile Asp Asp Leu  
 35 40 45  
 Val Val Leu Thr Ala Glu Pro His Lys Leu Pro Pro Ala Ser Glu Gln  
 50 55 60  
 Val Ile Lys Asp Leu Lys Gly Ser Asp Tyr Ser Trp Ser Tyr Gln Thr  
 65 70 75 80  
 Pro Pro Ser Ser Pro Ser Ser Ser Ser Arg Lys Ser Ser Met Cys  
 85 90 95  
 Ser Ala Pro Ser Ser Ser Ser Ser Ala Lys Gly Gly Gly Ser Pro Met  
 100 105 110  
 Ala Trp Gly Cys Pro Asn Ile Leu Thr Gln Phe His Leu Ser Leu Pro  
 115 120 125  
 Gln Pro Gly Ala Ala  
 130

<210> 3949  
 <211> 1462  
 <212> DNA  
 <213> Homo sapiens

<400> 3949  
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 120  
 ccaccatctt tctggctgca agagtcaggg gtcagaatgg ggggcagcca ccactgctga  
 180  
 aaagagttgg gggaggaacc cctgaaagga gagccagaaa tgggggagct ccaaactctt  
 240  
 tgtgtcagct ctgtccaaat ctctaactga cttgtgaact aaaaagaaag gtttctacca  
 300  
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 360  
 gtcacttcac agaaaaatat ataggtgctg ttttgccttg gaagccagac agatcagaat  
 420  
 attgggtaag atagctgggt cagctgtcct tggatggatc ccaaacta tgctccttc  
 480  
 caggcctgag aatcgccgaa cactgtccaa cacaatgtga tcaccaaca tatcacatgc  
 540

atcactgagc tgcaccaccc ttttcttcct cattgctttc aagagctcat acttatagtg  
 600  
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 660  
 aaagaagcgc ctgcacgtgt ctgccacaca ggtcattatt tgctccacag tcaagtattt  
 720  
 cttaattcgt aaggttcctt gaacaccctg ggaccattcg gcttcaggaa atacctcgag  
 780  
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 1320  
 ctgggctgtg agcagattta aaacctcaca gccgagctgg tcaactcaaga gagacctgaa  
 1380  
 gccgagtaag acaatcacga gggactgcag cagggcttcc atgtgctggg tgcttgaag  
 1440  
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 1462

&lt;210&gt; 3950

&lt;211&gt; 351

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3950

Met	Glu	Ala	Leu	Leu	Gln	Ser	Leu	Val	Ile	Val	Leu	Leu	Gly	Phe	Arg
1			5					10					15		
Ser	Leu	Leu	Ser	Asp	Gln	Leu	Gly	Cys	Glu	Val	Leu	Asn	Leu	Leu	Thr
		20					25					30			
Ala	Gln	Gln	Tyr	Glu	Ile	Phe	Ser	Arg	Ser	Leu	Arg	Lys	Asn	Arg	Glu
	35					40					45				
Leu	Phe	Val	His	Gly	Leu	Pro	Gly	Ser	Gly	Lys	Asn	Ile	Met	Ala	Met
	50				55					60					
Lys	Ile	Met	Glu	Lys	Ile	Arg	Asn	Val	Phe	His	Cys	Glu	Ala	His	Arg
65			70					75				80			
Ile	Leu	Tyr	Val	Cys	Glu	Asn	Gln	Pro	Leu	Arg	Asn	Phe	Ile	Ser	Asp
		85					90				95				
Arg	Asn	Ile	Cys	Arg	Ala	Glu	Thr	Arg	Glu	Thr	Phe	Leu	Arg	Glu	Lys
	100					105					110				
Phe	Glu	His	Ile	Gln	His	Ile	Val	Ile	Asp	Glu	Ala	Gln	Asn	Phe	Arg

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<211> 1012
<212> DNA
<213> Homo sapiens
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120
gtccaggagt tccagggtcc ggattatggt ccatggcagc agtccaagca ggaaaccaag
180
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540

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 780  
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 1012

&lt;210&gt; 3952

&lt;211&gt; 188

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3952

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Thr	Val	Val	Thr	Ser	Cys	Gln	Pro	Lys	Asn	Pro	Arg	Glu	Leu	His	Arg
			20					25					30		
Arg	Arg	Lys	Leu	Asp	Pro	Gly	Lys	Met	His	Ala	Lys	Ile	Trp	Leu	Met
		35					40					45			
Lys	Thr	Ser	Leu	Arg	Ser	Gly	Arg	Ala	Ala	Leu	Arg	Glu	Leu	Arg	Ser
	50					55					60				
Arg	Glu	Asn	Phe	Leu	Ser	Lys	Leu	Asn	Arg	Glu	Leu	Ile	Glu	Thr	Ile
65					70				75					80	
Gln	Glu	Met	Glu	Asn	Ser	Thr	Thr	Leu	His	Val	Arg	Ala	Leu	Leu	Gln
			85						90					95	
Gln	Gln	Asp	Thr	Leu	Ala	Thr	Ile	Ile	Asp	Ile	Leu	Glu	Tyr	Ser	Asn
		100						105					110		
Lys	Lys	Arg	Leu	Gln	Gln	Leu	Lys	Ser	Glu	Leu	Gln	Glu	Trp	Glu	Glu
		115					120					125			
Lys	Lys	Lys	Cys	Lys	Met	Ser	Tyr	Leu	Glu	Gln	Gln	Ala	Glu	Gln	Leu
		130				135						140			
Asn	Ala	Lys	Ile	Glu	Lys	Thr	Gln	Glu	Glu	Val	Asn	Phe	Leu	Ser	Thr
145					150					155				160	
Tyr	Met	Asp	His	Glu	Tyr	Ser	Ile	Lys	Ser	Val	Gln	Ile	Ser	Thr	Leu
			165						170					175	
Met	Arg	His	Cys	Ser	Arg	Leu	Arg	Thr	Ala	Ser	Arg				
			180					185							

&lt;210&gt; 3953

&lt;211&gt; 2900

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3953

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agaatgaagt tactctatta ctaatcaagc cgagaggagg cccactatgc ccccgtttat  
420  
catcctttcc cagttccttt ttgctggctc caaaacgatg ctcacatc ccacctaag  
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&lt;210&gt; 3954

&lt;211&gt; 627

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3954

Met	Gly	Leu	Leu	Gln	Gly	Leu	Leu	Arg	Val	Arg	Lys	Leu	Leu	Leu	Val
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Val	Cys	Val	Pro	Leu	Leu	Leu	Leu	Pro	Leu	Pro	Val	Leu	His	Pro	Ser

**3114**

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 Ser Lys Ser Ser Gly Leu Ser Thr Trp Ile Gly Asn Gln Met Leu Ser  
 485 490 495  
 Leu Ser Ser Leu Pro Pro Trp Ala Val Thr Leu Leu Ala Cys Ile Leu  
 500 505 510  
 Val Ser Ile Val Thr Glu Phe Val Ser Asn Pro Ala Thr Ile Thr Ile  
 515 520 525  
 Phe Leu Pro Ile Leu Cys Ser Leu Ser Glu Thr Met His Ile Asn Pro  
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 Leu Tyr Thr Leu Ile Pro Val Thr Met Cys Ile Ser Phe Ala Val Met  
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 Leu Pro Val Gly Asn Pro Pro Asn Ala Ile Val Phe Ser Tyr Gly His  
 565 570 575  
 Cys Gln Ile Lys Asp Met Val Lys Ala Gly Leu Gly Val Asn Val Ile  
 580 585 590  
 Gly Leu Val Ile Val Met Val Ala Ile Asn Thr Trp Gly Val Ser Leu  
 595 600 605  
 Phe His Leu Asp Thr Tyr Pro Ala Trp Ala Arg Val Ser Asn Ile Thr  
 610 615 620  
 Asp Gln Ala  
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&lt;210&gt; 3955

&lt;211&gt; 522

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3955

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&lt;210&gt; 3956

&lt;211&gt; 174

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3956

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 Ser Thr Met Thr Tyr Leu Asn Lys Gly Gln Phe Tyr Pro Ile Thr Leu  
 35 40 45  
 Lys Glu Val Ser Ser Ser Glu Asn Pro Ser Ser His Ser Lys Val Arg  
 50 55 60  
 Ser Val Ile Met Val Val Phe Ala Glu Asp Lys Ser Arg Glu Asp Gln  
 65 70 75 80  
 Leu Arg His Trp Lys Tyr Trp His Ser Arg Gln His Thr Ala Lys Gln  
 85 90 95  
 Arg Cys Ile Asp Ile Ala Asp Tyr Lys Glu Ser Phe Asn Thr Ile Ser  
 100 105 110  
 Asn Ile Glu Glu Ile Ala Tyr Asn Ala Ile Ser Phe Thr Trp Asp Ile  
 115 120 125  
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 130 135 140  
 Phe Ser Ser Gln Lys Gly Val Lys Gly Leu Pro Leu Asn Ile Gln Val  
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 Asp Thr Tyr Ser Tyr Asn Asn Arg Ser Asn Lys Pro Val His  
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&lt;210&gt; 3957

&lt;211&gt; 3891

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3957

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 720



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3891

&lt;210&gt; 3958

&lt;211&gt; 440

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3958

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 Leu Pro Gln His Glu Glu Ile Cys Leu Gly Leu Phe Thr Leu Ile Leu  
 20 25 30  
 Thr Glu Pro Ala Gln Ala Gln Lys Cys Tyr Arg Asp Leu Ala Leu Val  
 35 40 45  
 Ser Arg Asp Gly Met Asn Ile Val Leu Asn Lys Ile Asn Gln Ile Leu  
 50 55 60  
 Met Glu Lys Tyr Leu Lys Leu Gln Asp Thr Cys Arg Thr Gln Leu Val  
 65 70 75 80  
 Trp Leu Val Arg Glu Leu Val Lys Ser Gly Val Leu Gly Ala Asp Gly  
 85 90 95  
 Val Cys Met Thr Phe Met Lys Gln Ile Ala Gly Gly Asp Val Thr Ala  
 100 105 110  
 Lys Asn Ile Trp Leu Ala Glu Ser Val Leu Asp Ile Leu Thr Glu Gln  
 115 120 125  
 Arg Glu Trp Val Leu Lys Ser Ser Ile Leu Ile Ala Met Ala Val Tyr  
 130 135 140  
 Thr Tyr Leu Arg Leu Ile Val Asp His His Gly Thr Ala Gln Leu Gln  
 145 150 155 160  
 Ala Leu Arg Gln Lys Glu Val Asp Phe Cys Ile Ser Leu Leu Arg Glu  
 165 170 175  
 Arg Phe Met Glu Cys Leu Met Ile Gly Arg Asp Leu Val Arg Leu Leu  
 180 185 190  
 Gln Asn Val Ala Arg Ile Pro Glu Phe Glu Leu Leu Trp Lys Asp Ile  
 195 200 205  
 Ile His Asn Pro Gln Ala Leu Ser Pro Gln Phe Thr Gly Ile Leu Gln  
 210 215 220  
 Leu Leu Gln Ser Arg Thr Ser Arg Lys Phe Leu Ala Cys Arg Leu Thr  
 225 230 235 240  
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 245 250 255  
 Gly Gln Gln Lys Arg Tyr Gln Asp Trp Phe Gln Arg Gln Tyr Leu Ser  
 260 265 270  
 Thr Pro Asp Ser Gln Ser Leu Arg Cys Asp Leu Ile Arg Tyr Ile Cys  
 275 280 285  
 Gly Val Val His Pro Ser Asn Glu Val Leu Ser Ser Asp Ile Leu Pro  
 290 295 300  
 Arg Trp Ala Ile Ile Gly Trp Leu Leu Thr Thr Cys Thr Ser Asn Val  
 305 310 315 320  
 Ala Ala Ser Asn Ala Lys Leu Ala Leu Phe Tyr Asp Trp Leu Phe Phe  
 325 330 335  
 Ser Pro Asp Lys Asp Ser Ile Met Asn Ile Glu Pro Ala Ile Leu Val  
 340 345 350  
 Met His His Ser Met Lys Pro His Pro Ala Ile Thr Ala Thr Leu Leu  
 355 360 365  
 Asp Phe Met Cys Arg Ile Ile Pro Asn Phe Tyr Pro Pro Leu Glu Gly  
 370 375 380  
 His Val Arg Gln Gly Val Phe Ser Ser Leu Asn His Ile Val Glu Lys

385                                      390                                      395                                      400  
 Arg Val Leu Ala Cys Lys Lys Tyr Trp Leu Tyr Leu Arg Leu Leu Gly  
    405                                      410                                      415  
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 Thr Lys Thr Pro Ser Ser Pro Val  
    435                                      440

<210> 3959  
 <211> 752  
 <212> DNA  
 <213> Homo sapiens

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 <211> 94  
 <212> PRT  
 <213> Homo sapiens

<400> 3960  
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    20                                      25                                      30  
 Ser Lys Tyr Gly Ser Gln Phe Gln Gly Asn Ser Gln His Asp Ala Leu  
    35                                      40                                      45  
 Glu Phe Leu Leu Trp Leu Leu Asp Arg Val His Glu Asp Leu Glu Gly

50		55		60
Ser Ser Arg Trp Ala Arg Cys Arg Arg Ser Phe Arg Leu Lys Pro Leu				
65		70		75
Lys Pro Leu Arg Thr Ala Cys His His Gln Leu Ser Phe Leu				80
	85		90	

&lt;210&gt; 3961

&lt;211&gt; 2505

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3961

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&lt;210&gt; 3962

&lt;211&gt; 306

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3962

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Gly	Asn	Gly	Thr	Pro	Cys	Ser	Leu	Lys	Gln	Asn	Arg	Pro	Arg	Ser	Ser
			20					25					30		
Thr	Val	Met	Tyr	Ile	Cys	His	Pro	Glu	Ser	Lys	His	Glu	Ile	Leu	Ser

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 65 70 75 80  
 Asp Ile Phe Cys Gln Ser Leu Pro Gly Ser Pro Phe Lys Pro Leu Thr  
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 Leu Arg Gln Leu Glu Gln Gln Glu Glu Ile Leu Arg Val Pro Phe Arg  
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 Arg Asn Lys Glu Glu Asp Leu Gln Ser Thr Lys Glu Glu Arg Phe Pro  
 115 120 125  
 Ala Ile His Lys Ser Ile Ala Ile Gly Ser Gln Pro Val Leu Thr Val  
 130 135 140  
 Gly Thr Thr His Ile Ser Lys Leu Thr Asp Asp Gln Leu Ile Lys Glu  
 145 150 155 160  
 Phe Leu Ser Gly Ser Tyr Cys Phe Arg Gly Gly Val Gly Trp Trp Lys  
 165 170 175  
 Tyr Glu Phe Cys Tyr Gly Lys His Val His Gln Tyr His Glu Asp Lys  
 180 185 190  
 Asp Ser Gly Lys Thr Ser Val Val Val Gly Thr Trp Asn Gln Glu Glu  
 195 200 205  
 His Ile Glu Trp Ala Lys Lys Asn Thr Ala Arg Ala Tyr His Leu Gln  
 210 215 220  
 Asp Asp Gly Thr Gln Thr Val Arg Met Val Ser His Phe Tyr Gly Asn  
 225 230 235 240  
 Gly Asp Ile Cys Asp Ile Thr Asp Lys Pro Arg Gln Val Thr Val Lys  
 245 250 255  
 Leu Lys Cys Lys Glu Ser Asp Ser Pro His Ala Val Thr Val Tyr Met  
 260 265 270  
 Leu Glu Pro His Ser Cys Gln Tyr Ile Leu Gly Val Glu Ser Pro Val  
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 Ile Cys Lys Ile Leu Asp Thr Ala Asp Glu Asn Gly Leu Leu Ser Leu  
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 Pro Asn  
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&lt;210&gt; 3963

&lt;211&gt; 1513

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3963

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&lt;210&gt; 3964

&lt;211&gt; 436

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3964

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Lys	Gly	Gly	Asn	Lys	Gln	Glu	Glu	Ala	Trp	Ile	Asn	Pro	Phe	Val	Lys
			20					25					30		
Gln	Phe	Ser	Asn	Ile	Ser	Phe	Ser	Arg	Asp	Ser	Pro	Glu	Glu	Asn	Val
		35					40					45			
Gln	Ser	Asn	Lys	Met	Asp	Leu	Ser	Gly	Gly	Met	Leu	Gln	Asp	Lys	Arg



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Met Glu Ile Asp Lys His Ser Leu Asn Ile Gly Asp Tyr Asn Arg Thr		
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Val Gly Lys Gly Pro Gly Ser Arg Pro Gln Ile Ser Lys Glu Ser Ser		80
	85	90
Met Glu Arg Asn Pro Tyr Phe Asp Lys Asn Gly Asn Pro Ser Met Phe		95
	100	105
Gly Val Gly Asn Thr Ala Ala Gln Pro Arg Gly Met Gln Gln Pro Pro		110
	115	120
Ala Gln Pro Leu Ser Ser Ser Gln Pro Asn Leu Arg Ala Gln Val Pro		125
	130	135
Pro Pro Leu Leu Ser Pro Gln Val Pro Val Ser Leu Leu Lys Tyr Ala		140
145	150	155
Pro Asn Asn Gly Gly Leu Asn Pro Leu Phe Gly Pro Gln Gln Val Ala		160
	165	170
Met Leu Asn Gln Leu Ser Gln Leu Asn Gln Leu Ser Gln Ile Ser Gln		175
	180	185
Leu Gln Arg Leu Leu Ala Gln Gln Gln Arg Ala Gln Ser Gln Arg Ser		190
	195	200
Val Pro Ser Gly Asn Arg Pro Gln Gln Asp Gln Gln Gly Arg Pro Leu		205
210	215	220
Ser Val Gln Gln Gln Met Met Gln Gln Ser Arg Gln Leu Asp Pro Asn		225
	230	235
Leu Leu Val Lys Gln Gln Thr Pro Pro Ser Gln Gln Gln Pro Leu His		240
	245	250
Gln Pro Ala Met Lys Ser Phe Leu Asp Asn Val Met Pro His Thr Thr		255
	260	265
Pro Glu Leu Gln Lys Gly Pro Ser Pro Ile Asn Ala Phe Ser Asn Phe		270
	275	280
Pro Ile Gly Leu Asn Ser Asn Leu Asn Val Asn Met Asp Met Asn Ser		285
290	295	300
Ile Lys Glu Pro Gln Ser Arg Leu Arg Lys Trp Thr Thr Val Asp Ser		305
	310	315
Ile Ser Val Asn Thr Ser Leu Asp Gln Asn Ser Ser Lys His Gly Ala		320
	325	330
Ile Ser Ser Gly Phe Arg Leu Glu Glu Ser Pro Phe Val Pro Tyr Asp		335
	340	345
Phe Met Asn Ser Ser Thr Ser Pro Ala Ser Pro Pro Gly Ser Ile Gly		350
	355	360
Asp Gly Trp Pro Arg Ala Lys Ser Pro Asn Gly Ser Ser Ser Val Asn		365
	370	375
Trp Pro Pro Glu Phe Arg Pro Gly Glu Pro Trp Lys Gly Tyr Pro Asn		380
385	390	395
Ile Asp Pro Glu Thr Asp Pro Tyr Val Thr Pro Gly Ser Val Ile Asn		400
	405	410
Asn Leu Pro Ile Asn Thr Val Arg Glu Val Asp His Leu Arg Asp Arg		415
	420	425
Asn Ser Gly Thr		430
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&lt;210&gt; 3965

&lt;211&gt; 2850

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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&lt;210&gt; 3966

&lt;211&gt; 782

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3966

Met Gly Pro Pro Leu Ala Pro Arg Pro Ala His Val Pro Gly Glu Ala  
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 Gly Pro Arg Arg Thr Arg Glu Ser Arg Pro Gly Ala Val Ser Phe Ala

3128

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Gly Pro Tyr Ile Phe Leu Glu Gly Lys Lys Pro Leu Leu Tyr Phe Pro				
465		470		480
Asp Thr Pro Pro Pro Pro Leu Glu Lys Ala Ala Glu Ala Ala Leu Phe				
	485		490	495
Lys Gly Lys Trp Asp Asp Glu Ala Arg Glu Met Ala Pro Pro Pro Ala				
	500		505	510
Pro Leu Leu Ala Pro Arg Pro Gly Glu Thr Arg Pro Gly Cys Arg Lys				
	515		520	525
Pro Gly Thr Val Ser Phe Ala Asp Val Ala Val Tyr Phe Ser Pro Glu				
	530		535	540
Glu Trp Gly Cys Leu Arg Pro Ala Gln Arg Ala Leu Tyr Arg Asp Val				
545		550		560
Met Gln Glu Thr Tyr Gly His Leu Gly Ala Leu Gly Phe Pro Gly Pro				
	565		570	575
Lys Pro Ala Leu Ile Ser Trp Met Glu Gln Glu Ser Glu Ala Trp Ser				
	580		585	590
Pro Ala Ala Gln Asp Pro Glu Lys Gly Glu Arg Leu Gly Gly Ala Arg				
	595		600	605
Arg Gly Asp Val Pro Asn Arg Lys Glu Glu Glu Pro Glu Glu Val Pro				
	610		615	620
Arg Ala Lys Gly Pro Arg Lys Ala Pro Val Lys Glu Ser Pro Glu Val				
625		630		640
Leu Val Glu Arg Asn Pro Asp Pro Ala Ile Ser Val Ala Pro Ala Arg				
	645		650	655
Ala Gln Pro Pro Lys Asn Ala Ala Trp Asp Pro Thr Thr Gly Ala Gln				
	660		665	670
Pro Pro Ala Pro Ile Pro Ser Met Asp Ala Gln Ala Gly Gln Arg Arg				
	675		680	685
His Val Cys Thr Asp Cys Gly Arg Arg Phe Thr Tyr Pro Ser Leu Leu				
	690		695	700
Val Ser His Arg Arg Met His Ser Gly Glu Arg Pro Phe Pro Cys Pro				
705		710		720
Glu Cys Gly Met Arg Phe Lys Arg Lys Phe Ala Val Glu Ala His Gln				
	725		730	735
Trp Ile His Arg Ser Cys Ser Gly Gly Arg Arg Gly Arg Arg Pro Gly				
	740		745	750
Ile Arg Ala Val Pro Arg Ala Pro Val Arg Gly Asp Arg Asp Pro Pro				
	755		760	765
Val Leu Phe Arg His Tyr Pro Asp Ile Phe Glu Glu Cys Gly				
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&lt;210&gt; 3967

&lt;211&gt; 892

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3967

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 180

gccctggagg tggagtggca cctgctggcc caccacagca tcacagatgt ggctgtgatt  
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 360  
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 420  
 aagaaggcgc tcatcaggca cttccacccc tcatgaccgc gcagactggg actgcgggtc  
 480  
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 540  
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 660  
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 720  
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 780  
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 840  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa  
 892

&lt;210&gt; 3968

&lt;211&gt; 151

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3968

Xaa	Pro	Ala	Arg	Pro	Arg	Arg	Ala	Arg	Gly	Gly	Gly	Arg	Gly	Arg	Val
1				5					10					15	
Val	Ala	Arg	Gln	Ile	Leu	Pro	Arg	Gly	Arg	Gly	Arg	Leu	Val	Gly	Asp
			20					25					30		
Thr	Val	Val	Phe	Lys	Asp	Gly	Gln	Tyr	Trp	Ile	Arg	Gly	Arg	Thr	Ser
		35				40					45				
Val	Asp	Ile	Ile	Lys	Thr	Gly	Gly	Tyr	Lys	Val	Ser	Ala	Leu	Glu	Val
	50					55					60				
Glu	Trp	His	Leu	Leu	Ala	His	Pro	Ser	Ile	Thr	Asp	Val	Ala	Val	Ile
	65				70					75					80
Gly	Val	Pro	Asp	Met	Thr	Trp	Gly	Gln	Arg	Val	Thr	Ala	Val	Val	Thr
			85					90					95		
Leu	Arg	Glu	Gly	His	Ser	Leu	Ser	His	Arg	Glu	Leu	Lys	Glu	Trp	Ala
			100					105					110		
Arg	Asn	Val	Leu	Ala	Pro	Tyr	Ala	Val	Pro	Ser	Glu	Leu	Val	Leu	Val
		115					120					125			
Glu	Glu	Ile	Pro	Arg	Asn	Gln	Met	Gly	Lys	Ile	Asp	Lys	Lys	Ala	Leu
	130					135					140				
Ile	Arg	His	Phe	His	Pro	Ser									
145					150										

&lt;210&gt; 3969

&lt;211&gt; 915



&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3969

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 120  
 ggattgcaac tcggggaggg atggagcacg cgtcgtcgcc tgggaaacgg gtcgacccgc  
 180  
 ggaaggcgag cgggtgggac ttccggagca gttaatggtg gggaaacttt ctagtggatg  
 240  
 tgggaggagg cgggacttcc tgcagcaa at tggggctgtg cgccgctcaa gcccgtttac  
 300  
 ctgctcccca ggccggcacc caggatgggc gaggtggagg ccccgggccg cttgtggctc  
 360  
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 420  
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 480  
 ctggtcgcag atcctgagac ccggacagtg gcagtgaac aggtatcagt gcctctgcaa  
 540  
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 600  
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 660  
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 720  
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 780  
 atcgggaggc tgaagcggga ggatcccttg agcccagtag gtcaaggggtg tagtgagcag  
 840  
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 900  
 aagaaaaaat atggc  
 915

&lt;210&gt; 3970

&lt;211&gt; 89

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3970

Met	Gly	Glu	Val	Glu	Ala	Pro	Gly	Arg	Leu	Trp	Leu	Glu	Ser	Pro	Pro
1				5					10					15	
Gly	Gly	Ala	Pro	Pro	Ile	Phe	Leu	Pro	Ser	Asp	Gly	Gln	Ala	Leu	Val
			20					25					30		
Leu	Gly	Arg	Gly	Pro	Leu	Thr	Gln	Val	Thr	Asp	Arg	Lys	Cys	Ser	Arg
		35					40					45			
Thr	Gln	Val	Glu	Leu	Val	Ala	Asp	Pro	Glu	Thr	Arg	Thr	Val	Ala	Val
	50					55					60				
Lys	Gln	Val	Ser	Val	Pro	Leu	Gln	Gly	Pro	Ala	Arg	Pro	Gly	Asp	Gly
65					70					75				80	
Ile	Trp	Gly	Gly	Ile	Ala	Ser	Arg	Gln							



85

<210> 3971  
 <211> 433  
 <212> DNA  
 <213> Homo sapiens

<400> 3971  
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 120  
 ctggggaacg ggtaatcaga gaaaccctca ctcatagggt ggtgcccttt atgcagagac  
 180  
 ttaaaggaag gagggagggt ccctgacaga gagaatggta agtgcaaagg tcctgggtgg  
 240  
 gcttgtgttg aggaagagca aggccagtgt ggctggaaca gagtgagtga aggggagaga  
 300  
 gttgtaagca atgagcttag acaggaaatg gggctctggtt cacatgggaa atggtaggac  
 360  
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 420  
 ctaatcacca gaa  
 433

<210> 3972  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

<400> 3972  
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 1 5 10 15  
 Ser Leu Leu Thr Thr Leu Ser Pro Ser Leu Thr Leu Phe Gln Pro His  
 20 25 30  
 Trp Pro Cys Ser Ser Ser Thr Gln Ala His Pro Gly Pro Leu His Leu  
 35 40 45  
 Pro Phe Ser Leu Ser Gly Asp Leu Pro Pro Ser Phe Lys Ser Leu His  
 50 55 60  
 Lys Gly His His Pro Met Ser Glu Gly Phe Ser Asp Tyr Pro Phe Pro  
 65 70 75 80  
 Ser Arg Ala Leu Pro Ser Met Leu His Phe Phe Pro Arg Ala Leu Asn  
 85 90 95  
 Thr Thr Tyr Leu Ser Phe Ile Phe Ser Leu Ser Phe Phe Cys Leu Leu  
 100 105 110  
 Pro Leu Glu His His Gln Ser Arg  
 115 120

<210> 3973  
 <211> 984  
 <212> DNA  
 <213> Homo sapiens

<400> 3973

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 caaccataca gagtcaaggt catcgacttt gggtcagcca gccacgtgtc caaggctgtg  
 120  
 tgctccacct acttgagtc cagatattac agggcccctg agatcatcct tggtttacca  
 180  
 ttttgtgagg caattgacat gtggtccctg ggctgtgtta ttgcagaatt gttcctgggt  
 240  
 tggccgttat atccaggagc ttcggagtat gatcagattc ggtatatttc acaaacacag  
 300  
 ggtttgcctg ctgaatattt attaagcgcc gggacaaaga caactagggt tttcaaccgt  
 360  
 gacacggact caccatatcc tttgtggaga ctgaagacac cagatgacca tgaagcagag  
 420  
 acagggatta agtcaaaaga agcaagaaag tacattttca actgttttaga tgatatggcc  
 480  
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 540  
 cgggagttca ttgacctgtt gaagaagatg ctgaccattg atgctgacaa gagaatcact  
 600  
 ccaatcgaaa ccctgaacca tccctttgtc accatgacac acttactcga ttttccccac  
 660  
 agcacacacg tcaaatacatg tttccagaac atggagatct gcaagcgtcg ggtgaatatg  
 720  
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 780  
 accaacctga ccatgacctt taacaaccag ctgaccactg tccacaacca gccctcagcg  
 840  
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 900  
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 984

&lt;210&gt; 3974

&lt;211&gt; 328

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3974

Leu	Gly	Leu	Ile	His	Ala	Asp	Leu	Lys	Pro	Glu	Asn	Ile	Met	Leu	Val
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Asp	Pro	Ser	Arg	Gln	Pro	Tyr	Arg	Val	Lys	Val	Ile	Asp	Phe	Gly	Ser
			20					25					30		
Ala	Ser	His	Val	Ser	Lys	Ala	Val	Cys	Ser	Thr	Tyr	Leu	Gln	Ser	Arg
		35					40					45			
Tyr	Tyr	Arg	Ala	Pro	Glu	Ile	Ile	Leu	Gly	Leu	Pro	Phe	Cys	Glu	Ala
	50					55				60					
Ile	Asp	Met	Trp	Ser	Leu	Gly	Cys	Val	Ile	Ala	Glu	Leu	Phe	Leu	Gly
65					70				75					80	
Trp	Pro	Leu	Tyr	Pro	Gly	Ala	Ser	Glu	Tyr	Asp	Gln	Ile	Arg	Tyr	Ile
			85					90						95	
Ser	Gln	Thr	Gln	Gly	Leu	Pro	Ala	Glu	Tyr	Leu	Leu	Ser	Ala	Gly	Thr

			100					105					110				
Lys	Thr	Thr	Arg	Phe	Phe	Asn	Arg	Asp	Thr	Asp	Ser	Pro	Tyr	Pro	Leu		
		115						120					125				
Trp	Arg	Leu	Lys	Thr	Pro	Asp	Asp	His	Glu	Ala	Glu	Thr	Gly	Ile	Lys		
	130					135					140						
Ser	Lys	Glu	Ala	Arg	Lys	Tyr	Ile	Phe	Asn	Cys	Leu	Asp	Asp	Met	Ala		
145					150					155					160		
Gln	Val	Asn	Met	Thr	Thr	Asp	Leu	Glu	Gly	Ser	Asp	Met	Leu	Val	Glu		
			165					170						175			
Lys	Ala	Asp	Arg	Arg	Glu	Phe	Ile	Asp	Leu	Leu	Lys	Lys	Met	Leu	Thr		
		180						185					190				
Ile	Asp	Ala	Asp	Lys	Arg	Ile	Thr	Pro	Ile	Glu	Thr	Leu	Asn	His	Pro		
	195					200						205					
Phe	Val	Thr	Met	Thr	His	Leu	Leu	Asp	Phe	Pro	His	Ser	Thr	His	Val		
	210				215						220						
Lys	Ser	Cys	Phe	Gln	Asn	Met	Glu	Ile	Cys	Lys	Arg	Arg	Val	Asn	Met		
225					230					235				240			
Tyr	Asp	Thr	Val	Asn	Gln	Ser	Lys	Thr	Pro	Phe	Ile	Thr	His	Val	Ala		
			245					250					255				
Pro	Ser	Thr	Ser	Thr	Asn	Leu	Thr	Met	Thr	Phe	Asn	Asn	Gln	Leu	Thr		
		260						265					270				
Thr	Val	His	Asn	Gln	Pro	Ser	Ala	Ala	Ser	Met	Ala	Ala	Ala	Ala	Gln		
	275					280					285						
Arg	Ser	Met	Pro	Leu	Gln	Thr	Gly	Thr	Ala	Gln	Ile	Cys	Ala	Arg	Pro		
	290				295					300							
Asp	Pro	Phe	Gln	Gln	Ala	Leu	Ile	Val	Cys	Pro	Pro	Gly	Leu	Gln	Ala		
305				310				315					320				
Leu	Gln	Ala	Ser	Pro	Phe	Thr	Arg										
			325														

&lt;210&gt; 3975

&lt;211&gt; 593

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3975

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60

cggccagcct ccaacctcct cacagggaga gcctccctct ccactctctc cccagggatg  
120

gctcttgggg gctcaaggga gcctgggcct ctgccagcct gcaagctgcc tccaactctc  
180

agtcaggatt tggatgcccc cagtgcagtc ctgaggccgc cgccccccat cctactatcc  
240

tgcttctgag gcgtctcgga atcataggcc tcccgtggaa ggggagcagc aggcgaggtc  
300

tgcgtgagcc ccacagatgc ccgctcgcct gccagactta aaagtctgtg cccctccccg  
360

accaccaggg taccagatc ccaggcggct cagccaggcc cagagcccca agagctgggc  
420

tgcttctctc aactgggatc tggggtaggg gctgctcccc caagtccctg ggggactgtc  
480

tgggacatcc aggcctgtc ttcttgtctt aaccactcac aacagagaac acgatgttct  
540

gtccacgaaa gaaggcccca cacttctccc atccggcctc cacgtaaacy cgt  
593

<210> 3976

<211> 101

<212> PRT

<213> Homo sapiens

<400> 3976

Met	Gly	Phe	Ser	Leu	Leu	Glu	Gly	Pro	Ala	Ser	Leu	Gln	Pro	Pro	His
1				5				10					15		
Arg	Glu	Ser	Leu	Pro	Leu	His	Ser	Leu	Pro	Arg	Asp	Gly	Ser	Trp	Gly
			20					25					30		
Leu	Lys	Gly	Ala	Trp	Ala	Ser	Ala	Ser	Leu	Gln	Ala	Ala	Ser	Asn	Ser
		35				40					45				
Gln	Ser	Gly	Phe	Gly	Cys	Pro	Gln	Cys	Ser	Pro	Glu	Ala	Ala	Ala	Pro
	50					55				60					
His	Pro	Thr	Ile	Leu	Leu	Leu	Arg	Arg	Leu	Gly	Ile	Ile	Gly	Leu	Pro
65				70					75					80	
Trp	Lys	Gly	Ser	Ser	Arg	Arg	Gly	Leu	Arg	Glu	Pro	His	Arg	Cys	Pro
				85				90						95	
Leu	Ala	Cys	Gln	Thr											
				100											

<210> 3977

<211> 2668

<212> DNA

<213> Homo sapiens

<400> 3977

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120  
ttgtctcggg gggttgattc ggcacaaacc gcccgaccca ggggccgggtg cgcgtgtgga  
180  
aggggaagca ctcccctcgt ggtcgcctgg aggtgcgctg gaggaggggg tgacataacc  
240  
agggactcga ggtccgccgt gggaaatgatc cacgaactgc tcttggtctt gagcgggtac  
300  
cctgggtcca ttttcacctg gaacaagcgg agtggcctgc aggtatcgca ggacttcctt  
360  
ttcctccacc ccagtgagac cagtgtcctg aatcgactct gccggctcgg cacagactat  
420  
attcgcttca ctgagttcat tgaacagtac acgggccatg tgcaacagca ggatcaccat  
480  
ccatctcaac agggccaagg tgggttacat ggaatctacc tgcgggcctt ctgcacaggg  
540  
ctggattctg ttttgcagcc ttatcgccaa gcactgcttg atttgaaca agagttcctg  
600  
ggatgatccc atctctccat atcacatgac aactacttcc tagaccagtt ccagcttctt  
660  
ttccctctg tgatgggtgt agtagaacia attaaaagtc aaaagattca tggttgtcaa  
720

atcctggaaa cagtctacaa acacagctgt ggggggttgc ctctgttcg aagtgcactg  
780  
gaaaaaatcc tggccgtttg tcatggggtc atgtataaac agctctcagc ctggatgctc  
840  
catggactcc tcttgacca gcatgaagaa ttctttatca aacaggggcc atcttctggt  
900  
aatgtcagtg cccagccaga agaggacgag gaggatctgg gcattggggg actgacagga  
960  
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1020  
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1080  
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1140  
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1260  
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1320  
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1380  
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1440  
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1560  
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1620  
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1680  
gaaaagtaca atgttgtttt taagtactta ctgagtgtgc gccgggtgca agctgagctg  
1740  
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1800  
atcaagtggc gcctaagaaa tcacatggca tttttggtgg ataacttca gtactatctc  
1860  
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1920  
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1980  
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2100  
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2220  
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2340

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 2580  
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<210> 3978

<211> 667

<212> PRT

<213> Homo sapiens

<400> 3978

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			20					25					30		
Phe	Leu	His	Pro	Ser	Glu	Thr	Ser	Val	Leu	Asn	Arg	Leu	Cys	Arg	Leu
		35						40					45		
Gly	Thr	Asp	Tyr	Ile	Arg	Phe	Thr	Glu	Phe	Ile	Glu	Gln	Tyr	Thr	Gly
	50					55					60				
His	Val	Gln	Gln	Gln	Asp	His	His	Pro	Ser	Gln	Gln	Gly	Gln	Gly	Gly
65					70					75				80	
Leu	His	Gly	Ile	Tyr	Leu	Arg	Ala	Phe	Cys	Thr	Gly	Leu	Asp	Ser	Val
				85					90					95	
Leu	Gln	Pro	Tyr	Arg	Gln	Ala	Leu	Leu	Asp	Leu	Glu	Gln	Glu	Phe	Leu
		100						105					110		
Gly	Asp	Pro	His	Leu	Ser	Ile	Ser	His	Val	Asn	Tyr	Phe	Leu	Asp	Gln
		115						120					125		
Phe	Gln	Leu	Leu	Phe	Pro	Ser	Val	Met	Val	Val	Val	Glu	Gln	Ile	Lys
		130					135						140		
Ser	Gln	Lys	Ile	His	Gly	Cys	Gln	Ile	Leu	Glu	Thr	Val	Tyr	Lys	His
145					150					155				160	
Ser	Cys	Gly	Gly	Leu	Pro	Pro	Val	Arg	Ser	Ala	Leu	Glu	Lys	Ile	Leu
				165					170					175	
Ala	Val	Cys	His	Gly	Val	Met	Tyr	Lys	Gln	Leu	Ser	Ala	Trp	Met	Leu
			180					185					190		
His	Gly	Leu	Leu	Leu	Asp	Gln	His	Glu	Glu	Phe	Phe	Ile	Lys	Gln	Gly
		195					200						205		
Pro	Ser	Ser	Gly	Asn	Val	Ser	Ala	Gln	Pro	Glu	Glu	Asp	Glu	Glu	Asp
		210					215					220			
Leu	Gly	Ile	Gly	Gly	Leu	Thr	Gly	Lys	Gln	Leu	Arg	Glu	Leu	Gln	Asp
225					230					235				240	
Leu	Arg	Leu	Ile	Glu	Glu	Glu	Asn	Met	Leu	Ala	Pro	Ser	Leu	Lys	Gln
				245					250					255	
Phe	Ser	Leu	Arg	Val	Glu	Ile	Leu	Pro	Ser	Tyr	Ile	Pro	Val	Arg	Val
			260					265					270		
Ala	Glu	Lys	Ile	Leu	Phe	Val	Gly	Glu	Ser	Val	Gln	Met	Phe	Glu	Asn

275					280					285						
Gln	Asn	Val	Asn	Leu	Thr	Arg	Lys	Gly	Ser	Ile	Leu	Lys	Asn	Gln	Glu	
290					295					300						
Asp	Thr	Phe	Ala	Ala	Glu	Leu	His	Arg	Leu	Lys	Gln	Gln	Pro	Leu	Phe	
305					310					315					320	
Ser	Leu	Val	Asp	Phe	Glu	Gln	Val	Val	Asp	Arg	Ile	Arg	Ser	Thr	Val	
325					330					335						
Ala	Glu	His	Leu	Trp	Lys	Leu	Met	Val	Glu	Glu	Ser	Asp	Leu	Leu	Gly	
340					345					350						
Gln	Leu	Lys	Ile	Ile	Lys	Asp	Phe	Tyr	Leu	Leu	Gly	Arg	Gly	Glu	Leu	
355					360					365						
Phe	Gln	Ala	Phe	Ile	Asp	Thr	Ala	Gln	His	Met	Leu	Lys	Thr	Pro	Pro	
370					375					380						
Thr	Ala	Val	Thr	Glu	His	Asp	Val	Asn	Val	Ala	Phe	Gln	Gln	Ser	Ala	
385					390					395					400	
His	Lys	Val	Leu	Leu	Asp	Asp	Asp	Asn	Leu	Leu	Pro	Leu	Leu	His	Leu	
405					410					415						
Thr	Ile	Glu	Tyr	His	Xaa	Glu	Arg	Ser	Thr	Lys	Met	Leu	Leu	Arg	Xaa	
420					425					430						
Arg	Glu	Gly	Pro	Ser	Arg	Glu	Thr	Ser	Pro	Arg	Glu	Ala	Pro	Ala	Ser	
435					440					445						
Gly	Trp	Ala	Ala	Leu	Gly	Leu	Ser	Tyr	Lys	Val	Gln	Trp	Pro	Leu	His	
450					455					460						
Ile	Leu	Phe	Thr	Pro	Ala	Val	Leu	Glu	Lys	Tyr	Asn	Val	Val	Phe	Lys	
465					470					475					480	
Tyr	Leu	Leu	Ser	Val	Arg	Arg	Val	Gln	Ala	Glu	Leu	Gln	His	Cys	Trp	
485					490					495						
Ala	Leu	Gln	Met	Gln	Arg	Lys	His	Leu	Lys	Ser	Asn	Gln	Thr	Asp	Ala	
500					505					510						
Ile	Lys	Trp	Arg	Leu	Arg	Asn	His	Met	Ala	Phe	Leu	Val	Asp	Asn	Leu	
515					520					525						
Gln	Tyr	Tyr	Leu	Gln	Val	Asp	Val	Leu	Glu	Ser	Gln	Phe	Ser	Gln	Leu	
530					535					540						
Leu	His	Gln	Ile	Asn	Ser	Thr	Arg	Asp	Phe	Glu	Ser	Ile	Arg	Leu	Ala	
545					550					555					560	
His	Asp	His	Phe	Leu	Ser	Asn	Leu	Leu	Ala	Gln	Ser	Phe	Ile	Leu	Leu	
565					570					575						
Lys	Pro	Val	Phe	His	Cys	Leu	Asn	Glu	Ile	Leu	Asp	Leu	Cys	His	Ser	
580					585					590						
Phe	Cys	Ser	Leu	Val	Ser	Gln	Asn	Leu	Gly	Pro	Leu	Asp	Glu	Arg	Gly	
595					600					605						
Ala	Ala	Gln	Leu	Ser	Ile	Leu	Val	Lys	Gly	Phe	Ser	Arg	Gln	Ser	Ser	
610					615					620						
Leu	Leu	Phe	Lys	Ile	Leu	Ser	Ser	Val	Arg	Asn	His	Gln	Ile	Asn	Ser	
625					630					635					640	
Asp	Leu	Ala	Gln	Leu	Leu	Leu	Arg	Leu	Asp	Tyr	Asn	Lys	Tyr	Tyr	Thr	
645					650					655						
Gln	Ala	Gly	Gly	Thr	Leu	Gly	Ser	Phe	Gly	Met						
660					665											

&lt;210&gt; 3979

&lt;211&gt; 2746

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens



&lt;400&gt; 3979

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240  
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600  
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1200  
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 1860  
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 1920  
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 2160  
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 2220  
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 2280  
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 2340  
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 2460  
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 2520  
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 2580  
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 2640  
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 2700  
 cctcctcata gaagtgggtg ctttacataa ttttttgtgt aggtga  
 2746

&lt;210&gt; 3980

&lt;211&gt; 478

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3980

Met	Phe	Lys	Phe	His	Gln	Met	Lys	His	Ile	Phe	Glu	Ile	Leu	Asp	Lys
1				5					10					15	
Met	Arg	Cys	Leu	Arg	Lys	Arg	Ser	Thr	Val	Ser	Phe	Leu	Gly	Val	Leu
			20					25					30		
Val	Ile	Phe	Leu	Leu	Phe	Met	Asn	Leu	Tyr	Ile	Glu	Asp	Ser	Tyr	Val
		35					40					45			
Leu	Glu	Gly	Asp	Lys	Gln	Leu	Ile	Arg	Glu	Thr	Ser	Thr	His	Gln	Leu

50	55	60
Asn Ser Glu Arg Tyr Val His Thr Phe Lys Asp Leu Ser Asn Phe Ser		
65	70	75
Gly Ala Ile Asn Val Thr Tyr Arg Tyr Leu Ala Ala Thr Pro Leu Gln		80
	85	90
Arg Lys Arg Tyr Leu Thr Ile Gly Leu Ser Ser Val Lys Arg Lys Lys		95
	100	105
Gly Asn Tyr Leu Leu Glu Thr Ile Lys Ser Ile Phe Glu Gln Ser Ser		110
	115	120
Tyr Glu Glu Leu Lys Glu Ile Ser Val Val Val His Leu Ala Asp Phe		125
	130	135
Asn Ser Ser Trp Arg Asp Ala Met Val Gln Asp Ile Thr Gln Lys Phe		140
145	150	155
Ala His His Ile Ile Ala Gly Arg Leu Met Val Ile His Ala Pro Glu		160
	165	170
Glu Tyr Tyr Pro Ile Leu Asp Gly Leu Lys Arg Asn Tyr Asn Asp Pro		175
	180	185
Glu Asp Arg Val Lys Phe Arg Ser Lys Gln Asn Val Asp Tyr Ala Phe		190
	195	200
Leu Leu Asn Phe Cys Ala Asn Thr Ser Asp Tyr Tyr Val Met Leu Glu		205
	210	215
Asp Asp Val Arg Cys Ser Lys Asn Phe Leu Thr Ala Ile Lys Lys Val		220
225	230	235
Ile Ala Ser Leu Glu Gly Thr Tyr Trp Val Thr Leu Glu Phe Ser Lys		240
	245	250
Leu Gly Tyr Ile Gly Lys Leu Tyr His Ser His Asp Leu Pro Arg Leu		255
	260	265
Ala His Phe Leu Leu Met Phe Tyr Gln Glu Met Pro Cys Asp Trp Leu		270
	275	280
Leu Thr His Phe Arg Gly Leu Leu Ala Gln Lys Asn Val Ile Arg Phe		285
	290	295
Lys Pro Ser Leu Phe Gln His Met Gly Tyr Tyr Ser Ser Tyr Lys Gly		300
305	310	315
Thr Glu Asn Lys Leu Lys Asp Asp Asp Phe Glu Glu Glu Ser Phe Asp		320
	325	330
Ile Pro Asp Asn Pro Pro Ala Ser Leu Tyr Thr Asn Met Asn Val Phe		335
	340	345
Glu Asn Tyr Glu Ala Ser Lys Ala Tyr Ser Ser Val Asp Glu Tyr Phe		350
	355	360
Trp Gly Lys Pro Pro Ser Thr Gly Asp Val Phe Val Ile Val Phe Glu		365
	370	375
Asn Pro Ile Ile Ile Lys Lys Ile Lys Val Asn Thr Gly Thr Glu Asp		380
385	390	395
Arg Gln Asn Asp Ile Leu His His Gly Ala Leu Asp Val Gly Glu Asn		400
	405	410
Val Met Pro Ser Lys Gln Arg Arg Gln Cys Ser Ser Tyr Leu Arg Leu		415
	420	425
Gly Glu Phe Lys Asn Gly Asn Phe Glu Met Ser Gly Val Asn Gln Lys		430
	435	440
Ile Pro Phe Asp Ile His Cys Met Arg Ile Tyr Val Thr Lys Thr Gln		445
	450	455
Lys Glu Trp Leu Ile Ile Arg Ser Ile Ser Ile Trp Thr Ser		460
465	470	475

&lt;210&gt; 3981

&lt;211&gt; 4447

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3981

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120  
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180  
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240  
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300  
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360  
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420  
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480  
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540  
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600  
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720  
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780  
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1020  
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1080  
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1140  
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1260  
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1380  
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1440

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1500  
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3060

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4440  
aaaaaaa  
4447

&lt;210&gt; 3982

&lt;211&gt; 929

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens



&lt;400&gt; 3982

Arg	Gly	Leu	Ala	Val	Phe	Ile	Ser	Asp	Ile	Arg	Asn	Cys	Lys	Ser	Lys
1				5					10					15	
Glu	Ala	Glu	Ile	Lys	Arg	Ile	Asn	Lys	Glu	Leu	Ala	Asn	Ile	Arg	Ser
			20					25					30		
Lys	Phe	Lys	Gly	Asp	Lys	Ala	Leu	Asp	Gly	Tyr	Ser	Lys	Lys	Lys	Tyr
		35					40					45			
Val	Cys	Lys	Leu	Leu	Phe	Ile	Phe	Leu	Leu	Gly	His	Asp	Ile	Asp	Phe
	50					55					60				
Gly	His	Met	Glu	Ala	Val	Asn	Leu	Leu	Ser	Ser	Asn	Lys	Tyr	Thr	Glu
65					70					75					80
Lys	Gln	Ile	Gly	Tyr	Leu	Phe	Ile	Ser	Val	Leu	Val	Asn	Ser	Asn	Ser
			85						90					95	
Glu	Leu	Ile	Arg	Leu	Ile	Asn	Asn	Ala	Ile	Lys	Asn	Asp	Leu	Ala	Ser
			100					105					110		
Arg	Asn	Pro	Thr	Phe	Met	Gly	Leu	Ala	Leu	His	Cys	Ile	Ala	Ser	Val
	115					120						125			
Gly	Ser	Arg	Glu	Met	Ala	Glu	Ala	Phe	Ala	Gly	Glu	Ile	Pro	Lys	Val
	130					135					140				
Leu	Val	Ala	Gly	Asp	Thr	Met	Asp	Ser	Val	Lys	Gln	Ser	Ala	Ala	Leu
145					150					155					160
Cys	Leu	Leu	Arg	Leu	Tyr	Arg	Thr	Ser	Pro	Asp	Leu	Val	Pro	Met	Gly
			165						170					175	
Asp	Trp	Thr	Ser	Arg	Val	Val	His	Leu	Leu	Asn	Asp	Gln	His	Leu	Gly
		180						185					190		
Val	Val	Thr	Ala	Ala	Thr	Ser	Leu	Ile	Thr	Thr	Leu	Ala	Gln	Lys	Asn
	195						200					205			
Pro	Glu	Glu	Phe	Lys	Thr	Ser	Val	Ser	Leu	Ala	Val	Ser	Arg	Leu	Ser
	210					215					220				
Arg	Ile	Val	Thr	Ser	Ala	Ser	Thr	Asp	Leu	Gln	Asp	Tyr	Thr	Tyr	Tyr
225					230					235					240
Phe	Val	Pro	Ala	Pro	Trp	Leu	Ser	Val	Lys	Leu	Leu	Arg	Leu	Leu	Gln
			245						250					255	
Cys	Tyr	Pro	Pro	Pro	Asp	Pro	Ala	Val	Arg	Gly	Arg	Leu	Thr	Glu	Cys
		260						265					270		
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3146

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&lt;210&gt; 3983

&lt;211&gt; 2300

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3983

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&lt;210&gt; 3984

&lt;211&gt; 484

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3984

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3149

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470

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<213> Homo sapiens

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&lt;400&gt; 3987

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&lt;210&gt; 3988

&lt;211&gt; 1817

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3988

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			20					25					30		
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Glu	Gln	Ile	Gly	Ala	His	Arg	Lys	Ser	Lys	Lys	Ala	Leu	Ser	Ala	Lys

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Leu Glu Gln Ile Arg Lys Gln Gln Lys Glu His Ala Glu Leu Ile Glu				
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Arg Met Pro Ser Leu Pro Gly Trp Gln Pro Asn Ser Ala Pro Ala His				
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Ser Phe Thr Pro Ala Leu Pro Ala Ala Pro Pro Val Ala Asn Ser Ser				
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Gly Ser Thr Gln Ser Leu Ile Gln Leu Tyr Ser Asp Ile Ile Pro Glu				
	435		440	445
Glu Lys Lys Lys Lys Lys Arg Thr Arg Lys Lys Lys Arg Asp Asp Asp				
450		455		460
Ala Glu Ser Thr Lys Ala Pro Ser Thr Pro His Ser Asp Ile Thr Ala				
465		470		475
Pro Pro Thr Pro Gly Ile Ser Glu Thr Thr Ser Thr Pro Ala Val Ser				480

**3156**

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Leu Val Lys Glu Glu Pro	Pro Glu Pro Val Pro	Ser Pro Ile Ile Pro
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Ile Leu Pro Ser Thr Ala	Gly Lys Ser Ser Glu	Ser Arg Arg Asn Asp
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Ile Lys Thr Glu Pro Gly	Thr Leu Tyr Phe Ala	Ser Pro Phe Gly Pro
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Ser Pro Asn Gly Pro Arg	Ser Gly Leu Ile Ser	Val Ala Ile Thr Leu
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His Pro Thr Ala Ala Glu	Asn Ile Ser Ser Val	Val Ala Ala Phe Ser
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Asp Leu Leu His Val Arg	Ile Pro Asn Ser Tyr	Glu Val Ser Ser Ala
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Pro Asp Val Pro Ser Met	Gly Leu Val Ser Ser	His Arg Ile Asn Pro
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Gly Leu Glu Tyr Arg Gln	His Leu Leu Leu Arg	Gly Pro Pro Pro Gly
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Ser Ala Asn Pro Pro Arg	Leu Val Ser Ser Tyr	Arg Leu Lys Gln Pro
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Asn Val Pro Phe Pro Pro	Thr Ser Asn Gly Leu	Ser Gly Tyr Lys Asp
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Ser Ser His Gly Ile Ala	Glu Ser Ala Ala Leu	Arg Pro Gln Trp Cys
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Cys His Cys Lys Val Val	Ile Leu Gly Ser Gly	Val Arg Lys Ser Phe
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Lys Asp Leu Thr Leu Leu	Asn Lys Asp Ser Arg	Glu Ser Thr Lys Arg
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Val Glu Lys Asp Ile Val	Phe Cys Ser Asn Asn	Cys Phe Ile Leu Tyr
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Ser Ser Thr Ala Gln Ala	Lys Asn Ser Glu Asn	Lys Glu Ser Ile Pro
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Ser Leu Pro Gln Ser Pro	Met Arg Glu Thr Pro	Ser Lys Ala Phe His
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Gln Tyr Ser Asn Asn Ile	Ser Thr Leu Asp Val	His Cys Leu Pro Gln
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Leu Pro Glu Lys Ala Ser	Pro Pro Ala Ser Pro	Pro Ile Ala Phe Pro
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Pro Ala Phe Glu Ala Ala	Gln Val Glu Ala Lys	Pro Asp Glu Leu Lys
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Val Thr Val Lys Leu Lys	Pro Arg Leu Arg Ala	Val His Gly Gly Phe
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Glu Asp Cys Arg Pro Leu	Asn Lys Lys Trp Arg	Gly Met Lys Trp Lys
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Lys Trp Ser Ile His Ile	Val Ile Pro Lys Gly	Thr Phe Lys Pro Pro
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1300	1305	1310
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Val Tyr Glu Thr Gln Ala	Gly Ala Leu Ile Asn	Val Glu Leu Ala Leu

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Lys Gly Val Trp Asp Lys Ile Leu Glu Pro Val Ala Cys Val Arg Lys						
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Lys Ser Glu Met Leu Gln Leu Phe Pro Ala Tyr Leu Lys Gly Glu Asp						
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Lys	Phe	Asp	Phe	Glu	Asp	Asp	Gln	His	Lys	Ile	Pro	Cys	His	Cys	Gly
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<213> Homo sapiens

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Ser	Pro	Lys	Arg	Arg	Ser	Pro	Ser	Pro	Arg	Ser	Arg	Ser	His	Ser	Arg
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Asn	Ser	Asp	Lys	Ser	Ser	Ser	Asp	Arg	Ser	Arg	Arg	Ser	Ser	Ser	Ser
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Arg	Ser	Ser	Ser	Asn	His	Ser	Arg	Val	Glu	Ser	Ser	Lys	Arg	Lys	Ser
				165					170					175	
Ala	Lys	Glu	Lys	Lys	Ser	Ser	Ser	Lys	Asp	Ser	Arg	Pro	Ser	Gln	Ala
			180					185					190		
Ala	Gly	Asp	Asn	Gln	Gly	Asp	Glu	Val	Lys	Glu	Gln	Thr	Phe	Ser	Gly
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Gly	Thr	Ser	Gln	Asp	Thr	Lys	Ala	Ser	Glu	Ser	Ser	Lys	Pro	Trp	Pro
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Asp	Ala	Thr	Tyr	Gly	Thr	Gly	Ser	Ala	Ser	Arg	Ala	Ser	Ala	Val	Ser
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Ser	Gly	Ala	Gly	Tyr	Gln	Ser	Gly	Thr	His	Gln	Gly	Gln	Phe	Asp	His
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Gly	Ser	Gly	Ser	Leu	Ser	Pro	Ser	Lys	Lys	Ser	Pro	Val	Gly	Lys	Ser
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Ala	Ala	Ser	Gly	Gly	Ala	Ala	Tyr	Thr	Lys	Arg	Tyr	Leu	Glu	Glu	Gln
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Lys	Thr	Glu	Asn	Gly	Lys	Asp	Lys	Glu	Gln	Lys	Gln	Thr	Asn	Thr	Asp

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Asp Phe Glu Lys Lys Met Ala Asp Phe His Lys Glu Glu Met Asp Asp		
420	425	430
Gln Asp Lys Asp Lys Ala Lys Gly Arg Lys Glu Ser Glu Phe Asp Asp		
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Glu Pro Lys Phe Met Ser Lys Val Ile Gly Ala Asn Lys Asn Gln Glu		
450	455	460
Glu Glu Lys Ser Gly Lys Trp Glu Gly Leu Val Tyr Ala Pro Pro Gly		
465	470	475
Lys Glu Lys Gln Arg Lys Thr Glu Glu Leu Glu Glu Glu Ser Phe Pro		
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Glu Arg Ser Lys Lys Glu Asp Arg Gly Lys Arg Ser Glu Gly Gly His		
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515	520	525
Val Gln Glu Lys Ser Ser Ser Pro Pro Pro Arg Lys Thr Ser Glu Ser		
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Asp Glu Asp Leu Ala Arg Pro Ser Gly Leu Leu Ala Gln Glu Arg Lys		
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Tyr Leu Lys Arg Gly Thr Glu Gln Glu Ala Ala Lys Asn Lys Lys Ser		
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Pro Glu Ile His Arg Arg Ile Asp Ile Ser Pro Ser Thr Phe Arg Lys		
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His Gly Leu Ala His Asp Glu Met Lys Ser Pro Arg Glu Pro Gly Tyr		
690	695	700
Lys Ala Glu Gly Lys Tyr Lys Asp Asp Pro Val Asp Leu Arg Leu Asp		
705	710	715
Ile Glu Arg Arg Lys Lys His Lys Glu Arg Asp Leu Lys Arg Gly Lys		
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Ser Arg Glu Ser Val Asp Ser Arg Asp Ser Ser His Ser Arg Glu Arg		
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Pro Phe Glu Pro Ala Pro Tyr Gln Gln Gly Met Tyr Tyr Thr Pro Pro

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Pro Ala Pro Pro Tyr Leu Asp His Tyr Pro Pro Tyr Leu Gln Glu Arg
  65          70          75          80
Val Val Asn Ser Gln Tyr Gly Thr Gln Pro Gln Gln Tyr Pro Pro Ile
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Ile His Lys Ala Ala Arg Ser Gly Ser Leu Glu Cys Ile Ser Ala Leu
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Val Ala Asn Gly Ala His Val Glu
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&lt;210&gt; 3996

&lt;211&gt; 235

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3996

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&lt;211&gt; 7484

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3997

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&lt;210&gt; 3998

&lt;211&gt; 2220

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3998

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3173



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Leu Cys His Gln Gln Gln	Leu Gln Asn Pro Ala	Glu Glu Gly Met Ser
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Glu Thr Pro Met Leu Pro	Ser Ser Leu Met Leu	Leu Asn Thr Ala His
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Glu Tyr Leu Gly Arg Arg	Ser Trp Cys Cys Asn	Ser Asp Gly Ala Leu
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Lys Glu Lys Ala Cys Leu Val Asp Glu Asp Ser His Ser Ser Ala Gly					
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Leu Thr Ser Pro Pro Tyr Thr Ala Thr Pro Ile Asp His Asp Tyr Val					
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Ala Ala Glu Thr Pro Ala Ser Ala Cys Ile Pro Gly Lys Pro Ser Ala					
	1460		1465		1470
Ser Thr Pro Thr Leu Trp Asp Gly Lys Lys Arg Gly Asp Leu Pro Gly					
	1475		1480		1485
Glu Pro Val Ala Phe Pro Gln Gly Leu Pro Ala Gly Ala Glu Glu Gln					
	1490		1495		1500
Arg Gln Phe Leu Thr Glu Gln Cys Ile Ala Ser Phe Arg Leu Cys Leu					
	1505		1510		1515
Ser Arg Phe Pro Gln His Tyr Lys Ser Leu Tyr Arg Leu Ala Phe Leu					
	1525		1530		1535
Tyr Thr Tyr Ser Lys Thr His Arg Asn Leu Gln Trp Ala Arg Asp Val					
	1540		1545		1550
Leu Leu Gly Ser Ser Ile Pro Trp Gln Gln Leu Gln His Met Pro Ala					
	1555		1560		1565
Gln Gly Leu Phe Cys Glu Arg Asn Lys Thr Asn Phe Phe Asn Gly Ile					
	1570		1575		1580
Trp Arg Ile Pro Val Asp Glu Ile Asp Arg Pro Gly Ser Phe Ala Trp					
	1585		1590		1595
His Met Asn Arg Ser Ile Val Leu Leu Leu Lys Val Leu Ala Gln Leu					
	1605		1610		1615
Arg Asp His Ser Thr Leu Leu Lys Val Ser Ser Met Leu Gln Arg Thr					
	1620		1625		1630
Pro Asp Gln Gly Lys Lys Tyr Leu Arg Asp Ala Asp Arg Gln Val Leu					
	1635		1640		1645
Ala Gln Arg Ala Phe Ile Leu Thr Val Lys Val Leu Glu Asp Thr Leu					
	1650		1655		1660
Ser Glu Leu Ala Glu Gly Ser Glu Arg Pro Gly Pro Lys Val Cys Gly					
	1665		1670		1675
Leu Pro Gly Ala Arg Met Thr Thr Asp Val Ser His Lys Ala Ser Pro					
	1685		1690		1695
Glu Asp Gly Gln Glu Gly Leu Pro Gln Pro Lys Lys Pro Pro Leu Ala					
	1700		1705		1710
Asp Gly Ser Gly Pro Gly Pro Glu Pro Gly Gly Lys Val Gly Leu Leu					

1715 1720 1725  
 Asn His Arg Pro Val Ala Met Asp Ala Gly Asp Ser Ala Asp Gln Ser  
 1730 1735 1740  
 Gly Glu Arg Lys Asp Lys Glu Ser Pro Arg Ala Gly Pro Thr Glu Pro  
 1745 1750 1755 1760  
 Met Asp Thr Ser Glu Ala Thr Val Cys His Ser Asp Leu Glu Arg Thr  
 1765 1770 1775  
 Pro Pro Leu Leu Pro Gly Arg Pro Ala Arg Asp Arg Gly Pro Glu Ser  
 1780 1785 1790  
 Arg Pro Thr Glu Leu Ser Leu Glu Glu Leu Ser Ile Ser Ala Arg Gln  
 1795 1800 1805  
 Gln Pro Thr Pro Leu Thr Pro Ala Gln Pro Ala Pro Ala Pro Ala Pro  
 1810 1815 1820  
 Ala Thr Thr Thr Gly Thr Arg Ala Gly Gly His Pro Glu Glu Pro Leu  
 1825 1830 1835 1840  
 Ser Arg Leu Ser Arg Lys Arg Lys Leu Leu Glu Asp Thr Glu Ser Gly  
 1845 1850 1855  
 Lys Thr Leu Leu Leu Asp Ala Tyr Arg Val Trp Gln Gln Gly Gln Lys  
 1860 1865 1870  
 Gly Val Ala Tyr Asp Leu Gly Arg Val Glu Arg Ile Met Ser Glu Thr  
 1875 1880 1885  
 Tyr Met Leu Ile Lys Gln Val Asp Glu Glu Ala Ala Leu Glu Gln Ala  
 1890 1895 1900  
 Val Lys Phe Cys Gln Val His Leu Gly Ala Ala Ala Gln Arg Gln Ala  
 1905 1910 1915 1920  
 Ser Gly Asp Thr Pro Thr Thr Pro Lys His Pro Lys Asp Ser Arg Glu  
 1925 1930 1935  
 Asn Phe Phe Pro Val Thr Val Val Pro Thr Ala Pro Asp Pro Val Pro  
 1940 1945 1950  
 Ala Asp Ser Val Gln Arg Pro Ser Asp Ala His Thr Lys Pro Arg Pro  
 1955 1960 1965  
 Ala Leu Ala Ala Ala Thr Thr Ile Ile Thr Cys Pro Pro Ser Ala Ser  
 1970 1975 1980  
 Ala Ser Thr Leu Asp Gln Ser Lys Asp Pro Gly Pro Pro Arg Pro His  
 1985 1990 1995 2000  
 Arg Pro Glu Ala Thr Pro Ser Met Ala Ser Leu Gly Pro Glu Gly Glu  
 2005 2010 2015  
 Glu Leu Ala Arg Val Ala Glu Gly Thr Ser Phe Pro Pro Gln Glu Pro  
 2020 2025 2030  
 Arg His Ser Pro Gln Val Lys Met Ala Pro Thr Ser Ser Pro Ala Glu  
 2035 2040 2045  
 Pro His Cys Trp Pro Ala Glu Ala Ala Leu Gly Thr Gly Ala Glu Pro  
 2050 2055 2060  
 Thr Cys Ser Gln Glu Gly Lys Leu Arg Pro Glu Pro Arg Arg Asp Gly  
 2065 2070 2075 2080  
 Glu Ala Gln Glu Ala Ala Ser Glu Thr Gln Pro Leu Ser Ser Pro Pro  
 2085 2090 2095  
 Thr Ala Ala Ser Ser Lys Ala Pro Ser Ser Gly Ser Ala Gln Pro Pro  
 2100 2105 2110  
 Glu Gly His Pro Gly Lys Pro Glu Pro Ser Arg Ala Lys Ser Arg Pro  
 2115 2120 2125  
 Leu Pro Asn Met Pro Lys Leu Val Ile Pro Ser Ala Ala Thr Lys Phe  
 2130 2135 2140  
 Pro Pro Glu Ile Thr Val Thr Pro Pro Thr Pro Thr Leu Leu Ser Pro

2145	2150	2155	2160
Lys Gly Ser Ile Ser Glu Glu Thr Lys Gln Lys Leu Lys Ser Ala Ile			
	2165	2170	2175
Leu Ser Ala Gln Ser Ala Ala Asn Val Arg Lys Glu Ser Leu Cys Gln			
	2180	2185	2190
Pro Ala Leu Glu Val Leu Glu Thr Ser Ser Gln Glu Ser Ser Leu Glu			
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Ser Glu Thr Asp Glu Asp Asp Asp Tyr Met Asp Ile			
2210	2215	2220	

&lt;210&gt; 3999

&lt;211&gt; 2546

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3999

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1140

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2340  
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2400  
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2520  
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2546

&lt;210&gt; 4000

&lt;211&gt; 606

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4000

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Met Gly Leu Pro Val Gly Thr Ala Ala Ile Ala Pro Ile Ile Ala Ala
 1           5           10           15
Val Lys Asp Gly Lys Ser Ile Thr His Glu Gly Arg Glu Ile Leu Ala
          20           25           30
Glu Glu Leu Cys Thr Pro Pro Asp Pro Gly Ala Ala Phe Val Val Val
          35           40           45
Glu Cys Pro Asp Glu Ser Phe Ile Gln Pro Ile Cys Glu Asn Ala Thr
          50           55           60
Phe Gln Arg Tyr Gln Gly Lys Ala Asp Ala Pro Val Ala Leu Val Val
65           70           75           80
His Met Ala Pro Ala Ser Val Leu Val Asp Ser Arg Tyr Gln Gln Trp
          85           90           95
Met Glu Arg Phe Gly Pro Asp Thr Gln His Leu Val Leu Asn Glu Asn
          100          105          110
Cys Ala Ser Val His Asn Leu Arg Ser His Lys Ile Gln Thr Gln Leu
          115          120          125
Asn Leu Ile His Pro Asp Ile Phe Pro Leu Leu Thr Ser Phe Arg Cys
          130          135          140
Lys Lys Glu Gly Pro Thr Leu Ser Val Pro Met Val Gln Gly Glu Cys
145          150          155          160
Leu Leu Lys Tyr Gln Leu Arg Pro Arg Arg Glu Trp Gln Arg Asp Ala
          165          170          175
Ile Ile Thr Cys Asn Pro Glu Glu Phe Ile Val Glu Ala Leu Gln Leu
          180          185          190
Pro Asn Phe Gln Gln Ser Val Gln Glu Tyr Arg Arg Ser Ala Gln Asp
          195          200          205
Gly Pro Ala Pro Ala Glu Lys Arg Ser Gln Tyr Pro Glu Ile Ile Phe
          210          215          220
Leu Gly Thr Gly Ser Ala Ile Pro Met Lys Ile Arg Asn Val Ser Ala
225          230          235          240
Thr Leu Val Asn Ile Ser Pro Asp Thr Ser Leu Leu Leu Asp Cys Gly
          245          250          255
Glu Gly Thr Phe Gly Gln Leu Cys Arg His Tyr Gly Asp Gln Val Asp
          260          265          270
Arg Val Leu Gly Thr Leu Ala Ala Val Phe Val Ser His Leu His Ala
          275          280          285
Asp His His Thr Gly Leu Pro Ser Ile Leu Leu Gln Arg Glu Arg Ala
          290          295          300
Leu Ala Ser Leu Gly Lys Pro Leu His Pro Leu Leu Val Val Ala Pro
305          310          315          320
Asn Gln Leu Lys Ala Trp Leu Gln Gln Tyr His Asn Gln Cys Gln Glu
          325          330          335
Val Leu His His Ile Ser Met Ile Pro Ala Lys Cys Leu Gln Glu Gly
          340          345          350
Ala Glu Ile Ser Ser Pro Ala Val Glu Arg Leu Ile Ser Ser Leu Leu
          355          360          365
Arg Thr Cys Asp Leu Glu Glu Phe Gln Thr Cys Leu Val Arg His Cys
          370          375          380
Lys His Ala Phe Gly Cys Ala Leu Val His Thr Ser Gly Trp Lys Val
385          390          395          400
Val Tyr Ser Gly Asp Thr Met Pro Cys Glu Ala Leu Val Arg Met Gly
          405          410          415
Lys Asp Ala Thr Leu Leu Ile His Glu Ala Thr Leu Glu Asp Gly Leu

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420 425 430  
 Glu Glu Glu Ala Val Glu Lys Thr His Ser Thr Thr Ser Gln Ala Ile  
 435 440 445  
 Ser Val Gly Met Arg Met Asn Ala Glu Phe Ile Met Leu Asn His Phe  
 450 455 460  
 Ser Gln Arg Tyr Ala Lys Val Pro Leu Phe Ser Pro Asn Phe Ser Glu  
 465 470 475 480  
 Lys Val Gly Val Ala Phe Asp His Met Lys Val Cys Phe Gly Asp Phe  
 485 490 495  
 Pro Thr Met Pro Lys Leu Ile Pro Pro Thr Glu Ser Pro Val Cys Trp  
 500 505 510  
 Arg His Arg Gly Asp Gly Gly Ala Gln Gly Glu Ala Gly Ala Ala Ala  
 515 520 525  
 Gly Ala Gly Gly Pro Pro Val Gln Gly Ala Gly Arg Arg Pro Gly Gly  
 530 535 540  
 Trp Gly Ala Ser Ala Glu Ala Gly Pro His Arg Gly Ala Thr Gly Gln  
 545 550 555 560  
 Glu Gly Gln Ser Pro Val Lys Ile Trp Glu Thr Leu Asn Ser Glu Gly  
 565 570 575  
 Cys Val Ser Ser Ala Pro Arg Thr His Pro Tyr Leu Pro Ser Leu Leu  
 580 585 590  
 Val Glu Ala Glu Glu His Gly Pro Pro Gly Gly Ser Ser Gly  
 595 600 605

&lt;210&gt; 4001

&lt;211&gt; 1251

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4001

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 gtcattggcca ccgaccagga ctctactcc accagcagca cggaggagga gctggagcag  
 180  
 ttcagcagcc ccagcgtgaa gaagaagccc tccatgatcc tgggcaaggc tcggcaccgg  
 240  
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 300  
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 420  
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 480  
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 540  
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 600  
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 660  
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 720



atcctgcaga agttcaccag catgcacaag gcctactcac ctgagaagaa gatctccatc  
 780  
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 840  
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 960  
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 1080  
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<210> 4002

<211> 417

<212> PRT

<213> Homo sapiens

<400> 4002

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Thr	Ala	His	Ser	Gln	Ser	Ser	Pro	Glu	Phe	Lys	Gly	Ser	Leu	Ala	Ser
			20					25					30		
Leu	Ser	Asp	Ser	Leu	Gly	Val	Ser	Val	Met	Ala	Thr	Asp	Gln	Asp	Ser
		35					40					45			
Tyr	Ser	Thr	Ser	Ser	Thr	Glu	Glu	Glu	Leu	Glu	Gln	Phe	Ser	Ser	Pro
	50					55					60				
Ser	Val	Lys	Lys	Lys	Pro	Ser	Met	Ile	Leu	Gly	Lys	Ala	Arg	His	Arg
65					70					75					80
Leu	Ser	Phe	Ala	Ser	Phe	Ser	Ser	Met	Phe	His	Ala	Phe	Leu	Ser	Asn
				85					90					95	
Asn	Arg	Lys	Leu	Tyr	Lys	Lys	Val	Val	Glu	Leu	Ala	Gln	Asp	Lys	Gly
			100					105					110		
Ser	Tyr	Phe	Gly	Ser	Leu	Val	Gln	Asp	Tyr	Lys	Val	Tyr	Ser	Leu	Glu
		115					120					125			
Met	Met	Ala	Arg	Gln	Thr	Ser	Ser	Thr	Glu	Met	Leu	Gln	Glu	Ile	Arg
	130					135					140				
Thr	Met	Met	Thr	Gln	Leu	Lys	Ser	Tyr	Leu	Leu	Gln	Ser	Thr	Glu	Leu
145					150					155					160
Lys	Ala	Leu	Val	Asp	Pro	Ala	Leu	His	Ser	Glu	Glu	Glu	Leu	Glu	Ala
				165					170					175	
Ile	Val	Glu	Ser	Ala	Leu	Tyr	Lys	Cys	Val	Leu	Lys	Pro	Leu	Lys	Glu
			180					185					190		
Ala	Ile	Asn	Ser	Cys	Leu	His	Gln	Ile	His	Ser	Lys	Asp	Gly	Ser	Leu
		195					200					205			
Gln	Gln	Leu	Lys	Glu	Asn	Gln	Leu	Val	Ile	Leu	Ala	Thr	Thr	Thr	Thr
	210					215					220				
Asp	Leu	Gly	Val	Thr	Thr	Ser	Val	Pro	Glu	Val	Pro	Met	Met	Glu	Lys

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<210> 4003
<211> 581
<212> DNA
<213> Homo sapiens
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cgagcaaaaag atgtgataat accagcaaag ccacctgtca gctttttctc cttgaggtct
180
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240
gaggtggtac tgctcttctt ctatgccctt tgggtgtggac agtccatcgc tgccagggca
300
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360
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420
ctgtatcatc ggagtttttg accaatcgaa tacaaaggcc cccatgagtg ctgtttacat
480
tgagaagttt gtccgccggg tgatgaaacc acttctctac atcccatctc aatcagaatt
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581

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**<210> 4004**

&lt;211&gt; 160

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4004

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Arg Pro Glu Leu Leu Cys Gly Ala Val Ala Leu Gly Cys Ala Leu Leu
      20           25           30
Leu Ala Leu Lys Phe Thr Cys Ser Arg Ala Lys Asp Val Ile Ile Pro
      35           40           45
Ala Lys Pro Pro Val Ser Phe Ser Leu Arg Ser Pro Val Leu Asp
      50           55           60
Leu Phe Gln Gly Gln Leu Asp Tyr Ala Glu Tyr Val Arg Arg Asp Ser
65           70           75           80
Glu Val Val Leu Leu Phe Phe Tyr Ala Pro Trp Cys Gly Gln Ser Ile
      85           90           95
Ala Ala Arg Ala Glu Ile Glu Gln Ala Ala Ser Arg Leu Ser Asp Gln
      100          105          110
Val Leu Phe Val Ala Ile Asn Cys Trp Trp Asn Gln Gly Lys Cys Arg
      115          120          125
Lys Gln Lys His Phe Phe Tyr Phe Pro Val Ile Tyr Leu Tyr His Arg
      130          135          140
Ser Phe Gly Pro Ile Glu Tyr Lys Gly Pro His Glu Cys Cys Leu His
145          150          155          160

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&lt;210&gt; 4005

&lt;211&gt; 666

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4005

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300
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660

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666

<210> 4006  
<211> 222  
<212> PRT  
<213> Homo sapiens

<400> 4006  
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Met Met Lys Ala Ala Ile Ser Glu Thr Glu Asp Met Pro Met Phe Glu  
35 40 45  
Pro Lys Met Thr Arg Ser Lys Leu Lys Glu Val Val Glu Lys Gly Met  
50 55 60  
Val Ile Pro Thr Trp Asn Ile Ser Pro Ile Lys Lys Ala Asn Glu Ile  
65 70 75 80  
Lys Pro Pro Gln Phe Val Asp Ile His Leu Glu Glu Asp Asp Ser Ser  
85 90 95  
Asp Glu Glu Tyr Gln Pro Asp Asp Glu Glu Glu Asp Glu Thr Ala Glu  
100 105 110  
Glu Ser Leu Leu Glu Ser Asp Val Glu Ser Thr Ala Ser Ser Pro Arg  
115 120 125  
Gly Ala Lys Lys Ser Arg Leu Arg Gln Ser Ser Glu Met Thr Glu Thr  
130 135 140  
Asp Glu Glu Ser Gly Ile Leu Ser Glu Ala Glu Lys Val Thr Thr Pro  
145 150 155 160  
Ala Ile Arg His Ile Ser Ala Glu Val Val Pro Met Gly Pro Pro Pro  
165 170 175  
Pro Pro Lys Pro Lys Gln Thr Arg Asp Ser Thr Phe Met Glu Lys Leu  
180 185 190  
His Ala Val Asp Glu Glu Leu Ala Ser Ser Pro Val Cys Met Asp Ser  
195 200 205  
Phe Gln Pro Met Asp Asp Ser Leu Ile Ala Phe Arg Thr Arg  
210 215 220

<210> 4007  
<211> 2313  
<212> DNA  
<213> Homo sapiens

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240  
cggagaatgg aaactgaaag tggaaatcag gaaaaggtaa tggaagaaga aagcactgaa  
300

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<211> 290

<212> PRT

<213> Homo sapiens

<400> 4008

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His	Cys	Trp	Lys	Leu	Glu	Ile	Leu	Ser	Gly	Asp	His	Glu	Gln	Arg	Tyr
225					230				235					240	
Trp	Gln	Lys	Ile	Leu	Val	Asp	Arg	Gln	Ala	Lys	Leu	Asn	Gln	Pro	Arg
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 <212> DNA  
 <213> Homo sapiens

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 Met Gln Ala Ser Val Pro Gly Pro Ser Glu Glu Pro Val Val Tyr Asn  
 35 40 45  
 Pro Thr Thr Ala Ala Phe Ile Cys Asp Ser Leu Val Asn Glu Lys Thr  
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 Ile Gly Ser Pro Pro Asn Glu Phe Tyr Cys Ser Glu Asn Thr Ser Val  
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 Pro Asn Glu Ser Asn Lys Ile Leu Val Asn Lys Asp Val Pro Gln Lys



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Leu	Ala	Pro	Glu	Ile	Leu	Thr	Gly	Asp	Asn	Gln	Tyr	Tyr	Cys	Glu	Asn				
		115					120					125							
Cys	Ala	Ser	Leu	Gln	Asn	Ala	Glu	Lys	Thr	Met	Gln	Ile	Thr	Glu	Glu				
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Pro	Glu	Tyr	Leu	Ile	Leu	Thr	Leu	Leu	Arg	Phe	Ser	Tyr	Asp	Gln	Lys				
145					150					155					160				
Tyr	His	Val	Arg	Arg	Lys	Ile	Leu	Asp	Asn	Val	Ser	Leu	Pro	Leu	Val				
			165					170					175						
Leu	Glu	Leu	Pro	Val	Lys	Arg	Ile	Thr	Ser	Phe	Ser	Ser	Leu	Ser	Glu				
		180						185					190						
Ser	Trp	Ser	Val	Asp	Val	Asp	Phe	Thr	Asp	Leu	Ser	Glu	Asn	Leu	Ala				
		195					200					205							
Lys	Lys	Leu	Lys	Pro	Ser	Gly	Thr	Asp	Glu	Ala	Ser	Cys	Thr	Lys	Leu				
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225																			

&lt;210&gt; 4011

&lt;211&gt; 1371

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4011

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&lt;210&gt; 4012

&lt;211&gt; 419

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4012

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Ser	Arg	Ser	Arg	Ala	Arg	Ala	Gly	Glu	Leu	Trp	Leu	Pro	His	Gly	Thr
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Val	Ala	Thr	Pro	Val	Phe	Met	Pro	Val	Gly	Thr	Gln	Ala	Thr	Met	Lys
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Gly	Ile	Thr	Thr	Glu	Gln	Leu	Asp	Ala	Leu	Gly	Cys	Arg	Ile	Cys	Leu
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			85					90					95		
Lys	Ala	Asn	Gly	Leu	His	Gly	Phe	Met	Asn	Trp	Pro	His	Asn	Leu	Leu
		100						105					110		
Thr	Leu	Cys	Gly	Gly	Val	Ser	Leu	Asp	Ser	Gly	Gly	Phe	Gln	Met	Val
		115					120					125			
Ser	Leu	Val	Ser	Leu	Ser	Glu	Val	Thr	Glu	Glu	Gly	Val	Arg	Phe	Arg
	130					135					140				
Ser	Pro	Tyr	Asp	Gly	Asn	Glu	Thr	Leu	Leu	Ser	Pro	Glu	Lys	Ser	Val
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Val	Val	Ser	Ser	Thr	Val	Thr	Gly	Pro	Arg	Val	Glu	Glu	Ala	Met	Tyr
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Arg	Ser	Ile	Arg	Trp	Leu	Asp	Arg	Cys	Ile	Ala	Ala	His	Gln	Arg	Pro
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<212> DNA
<213> Homo sapiens
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<211> 473

<212> PRT

<213> Homo sapiens

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Thr	Pro	Ala	Leu	Gln	Pro	Leu	Ser	Arg	Ala	Ser	Pro	Ile	Pro	Gly	Thr
		35					40					45			
Pro	Asp	Arg	Leu	Pro	Cys	Gln	Gln	Leu	Leu	Gln	Gln	Ala	Gln	Ala	Ala
	50					55				60					
Ile	Pro	Arg	Ser	Thr	Ser	Phe	Asp	Arg	Lys	Leu	Pro	Asp	Gly	Thr	Arg
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Ser	Ser	Pro	Ser	Asn	Gln	Ser	Ser	Ser	Ser	Asp	Pro	Gly	Pro	Gly	Gly
			85					90				95			
Ser	Gly	Pro	Trp	Arg	Pro	Gln	Val	Gly	Tyr	Asp	Gly	Cys	Gln	Ser	Pro
		100						105				110			
Leu	Leu	Leu	Glu	His	Gln	Gly	Ser	Gly	Pro	Leu	Glu	Cys	Asp	Gly	Ala
		115				120						125			
Arg	Glu	Arg	Glu	Asp	Thr	Met	Glu	Ala	Ser	Arg	His	Pro	Glu	Thr	Lys
	130					135					140				
Trp	His	Gly	Pro	Pro	Ser	Lys	Val	Leu	Gly	Ser	Tyr	Lys	Glu	Arg	Ala
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<212> DNA
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240
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<210> 4016

<211> 95

<212> PRT

<213> Homo sapiens

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			20					25					30		
Asn	Arg	Arg	Met	Lys	Trp	Lys	Lys	Ile	Val	Leu	Gln	Gly	Gly	Gly	Leu
		35				40					45				
Glu	Ser	Pro	Thr	Lys	Pro	Lys	Gly	Arg	Pro	Lys	Lys	Asn	Ser	Ile	Pro
	50					55					60				
Thr	Ser	Glu	Gln	Leu	Thr	Glu	Gln	Glu	Arg	Ala	Lys	Asp	Ala	Glu	Lys
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Pro	Ala	Glu	Val	Pro	Gly	Glu	Pro	Ser	Asp	Arg	Ser	Arg	Glu	Asp	
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<210> 4017

<211> 1521

<212> DNA

<213> Homo sapiens

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&lt;210&gt; 4018

&lt;211&gt; 480

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4018

Gln	Gln	Pro	Glu	Asp	Tyr	Cys	Tyr	Ser	Ala	Arg	Ile	Arg	Ser	Thr	Val
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Leu	Gln	Gly	Leu	Pro	Phe	Gly	Gly	Val	Pro	Thr	Val	Leu	Ala	Leu	Asp



3195

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465 470 475 480

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<212> DNA  
<213> Homo sapiens

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120  
ctgaaccacc gctgtgtatc tgctgtccag cgctgtgatg gggttgatgc ctgtggcgat  
180  
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240  
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420  
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480  
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&lt;210&gt; 4020

&lt;211&gt; 296

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4020

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			20					25					30		
Leu	Val	Cys	Gly	Leu	Leu	Leu	Val	Ile	Ala	Leu	Gly	Cys	Thr	Cys	Lys
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Leu	Tyr	Ala	Ile	Arg	Thr	Gln	Glu	Tyr	Ser	Ile	Phe	Ala	Pro	Leu	Ser
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Gln	Leu	Ile	Ala	Gln	Gly	Ala	Ile	Pro	Pro	Val	Glu	Asp	Phe	Pro	Thr
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			100					105					110		
Gln	Ile	Leu	Arg	Gln	Asp	Met	Thr	Pro	Gly	Gly	Gly	Pro	Gly	Ala	Arg
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Arg	Arg	Gln	Arg	Gly	Arg	Leu	Met	Arg	Arg	Leu	Val	Arg	Arg	Leu	Arg
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	210					215				220					
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			245					250				255			
Ser	Pro	Pro	Gly	Pro	His	Thr	Ala	Val	Leu	Ala	Leu	Glu	Asp	Glu	Asp
		260				265				270					
Asp	Val	Leu	Leu	Val	Pro	Leu	Ala	Glu	Pro	Gly	Val	Trp	Val	Ala	Glu
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&lt;210&gt; 4021

&lt;211&gt; 4209

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4021

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180

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240

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300

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360

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420

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&lt;210&gt; 4022

&lt;211&gt; 885

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4022

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			20					25					30		
Arg	Ser	Ser	Ser	Ser	Cys	Val	Pro	Arg	Leu	Phe	Ser	Leu	Thr	Leu	Lys
		35					40					45			
Lys	Leu	Val	Met	Leu	Lys	Glu	Met	Asp	Lys	Asp	Leu	Asn	Ser	Val	Val
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Ile	Ala	Val	Lys	Leu	Gln	Gly	Ser	Lys	Arg	Ile	Leu	Arg	Ser	Asn	Glu
65					70					75					80
Ile	Val	Leu	Pro	Ala	Ser	Gly	Leu	Val	Glu	Thr	Glu	Leu	Gln	Leu	Thr
			85						90					95	
Phe	Ser	Leu	Gln	Tyr	Pro	His	Phe	Leu	Lys	Arg	Asp	Ala	Asn	Lys	Leu
			100					105					110		
Gln	Ile	Met	Leu	Gln	Arg	Arg	Lys	Arg	Tyr	Lys	Asn	Arg	Thr	Ile	Leu
		115					120					125			
Gly	Tyr	Lys	Thr	Leu	Ala	Val	Gly	Leu	Ile	Asn	Met	Ala	Glu	Val	Met
		130				135						140			
Gln	His	Pro	Asn	Glu	Gly	Ala	Leu	Val	Leu	Gly	Leu	His	Ser	Asn	Val
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Lys	Asp	Val	Ser	Val	Pro	Val	Ala	Glu	Ile	Lys	Ile	Tyr	Ser	Leu	Ser
			165						170					175	
Ser	Gln	Pro	Ile	Asp	His	Glu	Gly	Ile	Lys	Ser	Lys	Leu	Ser	Asp	Arg
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Ser	Pro	Asp	Ile	Asp	Asn	Tyr	Ser	Glu	Glu	Glu	Glu	Glu	Ser	Phe	Ser
		195					200					205			
Ser	Glu	Gln	Glu	Gly	Ser	Asp	Asp	Pro	Leu	His	Gly	Gln	Asp	Leu	Phe
	210					215						220			
Tyr	Glu	Asp	Glu	Asp	Leu	Arg	Lys	Val	Lys	Lys	Thr	Arg	Arg	Lys	Leu
225					230					235					240
Thr	Ser	Thr	Ser	Ala	Ile	Thr	Arg	Gln	Pro	Asn	Ile	Lys	Gln	Lys	Phe



3202

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690	695	700
Pro Ser Ser Ser Gly Leu Ser Arg Asp Ala Thr Ala Thr Pro Pro Ser		
705	710	715
Ser Pro Ser Met Ser Ser Ala Leu Ala Ile Val Gly Ser Pro Asn Ser		
725	730	735
Pro Tyr Gly Asp Val Ile Gly Leu Gln Val Asp Tyr Trp Leu Gly His		
740	745	750
Pro Gly Glu Arg Arg Arg Glu Gly Asp Lys Arg Asp Ala Ser Ser Lys		
755	760	765
Asn Thr Leu Lys Ser Val Phe Arg Ser Val Gln Val Ser Arg Leu Pro		
770	775	780
His Ser Gly Glu Ala Gln Leu Ser Gly Thr Met Ala Met Thr Val Val		
785	790	795
Thr Lys Glu Lys Asn Lys Lys Val Pro Thr Ile Phe Leu Ser Lys Lys		
805	810	815
Pro Arg Glu Lys Glu Val Asp Ser Lys Ser Gln Val Ile Glu Gly Ile		
820	825	830
Ser Arg Leu Ile Cys Ser Ala Lys Gln Gln Gln Thr Met Leu Arg Val		
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Ser Ile Asp Gly Val Glu Trp Ser Asp Ile Lys Phe Phe Gln Leu Ala		
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&lt;210&gt; 4023

&lt;211&gt; 5193

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4023

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420

accaatagca tcgtggctgc aggctgtgat cggaaaattg tagcctatgg aaaagaaggt  
480

cacatgctac aaacttttga ttatagccgt gaccctcagg agcgggagtt caccacagct  
540

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600

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&lt;210&gt; 4024

&lt;211&gt; 1690

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4024

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Trp	Gly	Asp	Lys	Lys	Val	Ile	Cys	Asn	Lys	Phe	Ile	Gln	Thr	Ser	Ala		
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Val	Thr	Cys	Leu	Gln	Trp	Pro	Ala	Glu	Tyr	Ile	Ile	Val	Phe	Gly	Leu		
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Ala	Glu	Gly	Lys	Val	Arg	Leu	Ala	Asn	Thr	Lys	Thr	Asn	Lys	Ser	Ser		
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Thr	Ile	Tyr	Gly	Thr	Glu	Ser	Tyr	Val	Val	Ser	Leu	Thr	Thr	Asn	Cys		
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Ser	Gly	Lys	Gly	Ile	Leu	Ser	Gly	His	Ala	Asp	Gly	Thr	Ile	Val	Arg		
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Tyr	Phe	Phe	Asp	Asp	Glu	Gly	Ser	Gly	Glu	Ser	Gln	Gly	Lys	Leu	Val		
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Asn	His	Pro	Cys	Pro	Pro	Tyr	Ala	Leu	Ala	Trp	Ala	Thr	Asn	Ser	Ile		
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Val	Ala	Ala	Gly	Cys	Asp	Arg	Lys	Ile	Val	Ala	Tyr	Gly	Lys	Glu	Gly		
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His	Met	Leu	Gln	Thr	Phe	Asp	Tyr	Ser	Arg	Asp	Pro	Gln	Glu	Arg	Glu		
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Phe	Thr	Thr	Ala	Val	Ser	Ser	Pro	Gly	Gly	Gln	Ser	Val	Val	Leu	Gly		
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Ser	Tyr	Asp	Arg	Leu	Arg	Val	Phe	Asn	Trp	Ile	Pro	Arg	Arg	Ser	Ile		
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Trp	Glu	Glu	Ala	Lys	Pro	Lys	Glu	Ile	Thr	Asn	Leu	Tyr	Thr	Ile	Thr		
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Cys	Gly	Gly	Val	Glu	Gln	Phe	Asp	Cys	Cys	Leu	Arg	Arg	Ser	Ile	Tyr		
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Lys	Asn	Lys	Phe	Glu	Leu	Thr	Tyr	Val	Gly	Pro	Ser	Gln	Val	Ile	Val		
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Lys	Asn	Leu	Ser	Ser	Gly	Thr	Arg	Val	Val	Leu	Lys	Ser	His	Tyr	Gly		
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Tyr	Glu	Val	Glu	Glu	Val	Lys	Ile	Leu	Gly	Lys	Glu	Arg	Tyr	Leu	Val		
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Ala	His	Thr	Ser	Glu	Thr	Leu	Leu	Leu	Gly	Asp	Leu	Asn	Thr	Asn	Arg		
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Phe	Glu	Asn	Glu	Asn	Val	Cys	Met	Ile	Phe	Asn	Ala	Gly	Glu	Leu	Thr		
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Leu	Val	Glu	Tyr	Gly	Asn	Asn	Asp	Thr	Leu	Gly	Ser	Val	Arg	Thr	Glu		
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Phe	Met	Asn	Pro	His	Leu	Ile	Ser	Val	Arg	Ile	Asn	Glu	Arg	Cys	Gln		
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Arg	Gly	Thr	Glu	Asp	Asn	Lys	Lys	Leu	Ala	Tyr	Leu	Ile	Asp	Ile	Lys		
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Thr	Ile	Ala	Ile	Val	Asp	Leu	Ile	Gly	Gly	Tyr	Asn	Ile	Gly	Thr	Val		
			405					410						415			
Ser	His	Glu	Ser	Arg	Val	Asp	Trp	Leu	Glu	Leu	Asn	Glu	Thr	Gly	His		
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Lys	Leu	Leu	Phe	Arg	Asp	Arg	Lys	Leu	Arg	Leu	His	Leu	Tyr	Asp	Ile		



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Glu	Ser	Cys	Ser	Lys	Thr	Met	Ile	Leu	Asn	Phe	Cys	Ser	Tyr	Met	Gln	
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Trp	Val	Pro	Gly	Ser	Asp	Val	Leu	Val	Ala	Gln	Asn	Arg	Asn	Ser	Leu	
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Cys	Val	Trp	Tyr	Asn	Ile	Glu	Ala	Pro	Glu	Arg	Val	Thr	Met	Phe	Thr	
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Ile	Arg	Gly	Asp	Val	Ile	Gly	Leu	Glu	Arg	Gly	Gly	Gly	Lys	Thr	Glu	
					500					505					510	
Val	Met	Val	Met	Glu	Gly	Val	Thr	Thr	Val	Ala	Tyr	Thr	Leu	Asp	Glu	
					515					520					525	
Gly	Leu	Ile	Glu	Phe	Gly	Thr	Ala	Ile	Asp	Asp	Gly	Asn	Tyr	Ile	Arg	
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Ala	Thr	Ala	Phe	Leu	Glu	Thr	Leu	Glu	Met	Thr	Pro	Glu	Thr	Glu	Ala	
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Met	Trp	Lys	Thr	Leu	Ser	Lys	Leu	Ala	Leu	Glu	Ala	Arg	Gln	Leu	His	
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Ile	Ala	Glu	Arg	Cys	Phe	Ser	Ala	Leu	Gly	Gln	Val	Ala	Lys	Ala	Arg	
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Phe	Leu	His	Glu	Thr	Asn	Glu	Ile	Ala	Asp	Gln	Val	Ser	Arg	Glu	Tyr	
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Leu	Glu	Lys	Asn	Tyr	Lys	Leu	Ala	Glu	Met	Ile	Phe	Leu	Glu	Gln	Asn	
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Ala	Val	Glu	Glu	Ala	Met	Gly	Met	Tyr	Gln	Glu	Leu	His	Arg	Trp	Asp	
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Gln	Lys	Gln	Leu	Asp	Ala	Ala	Ile	Asn	His	Tyr	Ile	Glu	Ala	Arg	Cys	
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Ser	Ile	Lys	Ala	Ile	Glu	Ala	Ala	Leu	Gly	Ala	Arg	Gln	Trp	Lys	Lys	
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Ala	Ile	Tyr	Ile	Leu	Asp	Leu	Gln	Asp	Arg	Asn	Thr	Ala	Ser	Lys	Tyr	
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Ala	Glu	Glu	Leu	Tyr	Thr	Lys	Gly	Asp	Arg	Thr	Lys	Asp	Ala	Ile	Asp	



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Lys Cys Met Arg Pro Glu Asp Val Ser Val Leu Tyr Ile Thr Gln Ala						
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Gln Glu Met Glu Lys Gln Gly Lys Tyr Arg Glu Ala Glu Arg Leu Tyr						
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Val Thr Val Gln Glu Pro Asp Leu Ala Ile Thr Met Tyr Lys Lys His						
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Lys Leu Tyr Asp Asp Met Ile Arg Leu Val Gly Lys His His Pro Asp						
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Leu Leu Ser Asp Thr His Leu His Leu Gly Lys Glu Leu Glu Ala Glu						
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Gly Arg Leu Gln Glu Ala Glu Tyr His Tyr Leu Glu Ala Gln Glu Trp						
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Lys Ala Thr Val Asn Met Tyr Arg Ala Ser Gly Leu Trp Glu Glu Ala						
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Tyr Arg Val Ala Arg Thr Gln Gly Gly Ala Asn Ala His Lys His Val						
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Ala Tyr Leu Trp Ala Lys Ser Leu Gly Gly Glu Ala Ala Val Arg Leu						
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Leu Asn Lys Leu Gly Leu Leu Glu Ala Ala Val Asp His Ala Ala Asp						
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Asn Cys Ser Phe Glu Phe Ala Phe Glu Leu Ser Arg Leu Ala Leu Lys						
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His Lys Thr Pro Glu Val His Leu Lys Tyr Ala Met Phe Leu Glu Asp						
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Glu Gly Lys Phe Glu Glu Ala Glu Ala Glu Phe Ile Arg Ala Gly Lys						
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Pro Lys Glu Ala Val Leu Met Phe Val His Asn Gln Asp Trp Glu Ala						
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Trp Met Lys Ala Ala Glu Leu Ser Ile Lys Phe Leu Pro Pro Gln Arg						
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Lys His Ser Ala Ala Ala Glu Leu Tyr Leu Asn Leu Asp Leu Val Lys						
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Glu Ala Ile Asp Ala Phe Ile Glu Gly Glu Glu Trp Asn Lys Ala Lys						

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His Tyr Lys Glu Phe Leu Lys Asn Gln Gly Lys Val Asp Ser Leu Val			
1330	1335	1340	
Gly Val Asp Val Ile Ala Ala Leu Asp Leu Tyr Val Glu Gln Gly Gln			
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Trp Asp Lys Cys Ile Glu Thr Ala Thr Lys Gln Asn Tyr Lys Ile Leu			
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His Lys Tyr Val Ala Leu Tyr Ala Thr His Leu Ile Arg Glu Gly Ser			
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Ser Ala Gln Ala Leu Ala Leu Tyr Val Gln His Gly Ala Pro Ala Asn			
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Pro Gln Asn Phe Asn Ile Tyr Lys Arg Ile Phe Thr Asp Met Val Ser			
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Ser Pro Gly Thr Asn Cys Ala Glu Ala Tyr His Ser Trp Ala Asp Leu			
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Arg Asp Val Leu Phe Asn Leu Ala Val Leu Ser Pro Ser Ser Ser Val			
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Gln Val Leu Pro Arg Asp Glu Arg Gly Ala Tyr Glu Ala Ser Leu Val			
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Asn Lys Asp Asn Trp Asn Lys Phe Leu Met Ala Ile Lys Thr Ser His			
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&lt;210&gt; 4025

&lt;211&gt; 908

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4025

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&lt;210&gt; 4026

&lt;211&gt; 302

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4026

Leu	Arg	Thr	His	Thr	Gly	Xaa	Lys	Pro	Tyr	Glu	Cys	Asn	His	Cys	Gly
1				5					10					15	
Lys	Ala	Phe	Ser	Asp	Pro	Ser	Ser	Leu	Arg	Leu	His	Leu	Arg	Ile	His
			20					25					30		
Thr	Gly	Glu	Lys	Pro	Tyr	Glu	Cys	Asn	Gln	Cys	Phe	His	Val	Phe	Arg
		35					40					45			
Thr	Ser	Cys	Asn	Leu	Lys	Ser	His	Lys	Arg	Ile	His	Thr	Gly	Glu	Asn
	50					55					60				
His	His	Glu	Cys	Asn	Gln	Cys	Gly	Lys	Ala	Phe	Ser	Thr	Arg	Ser	Ser
65					70					75				80	
Leu	Thr	Gly	His	Asn	Cys	Ile	His	Thr	Gly	Glu	Lys	Pro	Tyr	Glu	Cys
			85						90					95	
Lys	Glu	Cys	Gly	Lys	Thr	Phe	Met	Tyr	Asn	Ser	Ser	Leu	Ile	Gln	His

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<210> 4027
<211> 941
<212> DNA
<213> Homo sapiens
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<400> 4027
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120
ggattgattc agatgggatg tgttttccag agcacagaag tgaaacacgt gaccaaggta
180
gaatggatat tttcaggacg gcgcgcaaag gaggagattg tatttcgtta ctaccacaaa
240
ctcaggatgt ctgcggagta ctcccagagc tggggccact tccagaatcg tgtgaacctg
300
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360
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420
ctgcatgtca gcccggaaga gcctcgaaca ctggtgaccc cggcagccct gaggcctctg
480
gtcttgggtg gtaatcagtt ggtgatcatt gtgggaattg tctgtgccac aatcctgctg
540
ctccctgttc tgatattgat cgtgaagaag acctgtggaa ataagagttc agtgaattct
600
acagtcttgg tgaagaacac gaagaagact aatccagaga tgaaagaaaa accctgccat
660

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tttgaaagat gtgaagggga ggtgaacaca cgcttcagcc taaaacacta agtagatgca  
 720  
 ggccctgggcc gttctcatat ccccggaac catatcttac ccattgtatg tcgcagcttg  
 780  
 caggccagtg cttggcacag agcagggact caggaagcct ttgtcactaa agtaagagcc  
 840  
 tctgcggagt acagtgcatt gggtcggctg ggacaccccc aggcagcaga tcctgggtatt  
 900  
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 941

<210> 4028

<211> 236

<212> PRT

<213> Homo sapiens

<400> 4028

Ala	Arg	Gln	Gly	Thr	Tyr	Ile	Cys	Glu	Ile	Arg	Leu	Lys	Gly	Glu	Ser	1	5	10	15
Gln	Val	Phe	Lys	Lys	Ala	Val	Val	Leu	His	Val	Leu	Pro	Glu	Glu	Pro	20	25	30	
Lys	Glu	Leu	Met	Val	His	Val	Gly	Gly	Leu	Ile	Gln	Met	Gly	Cys	Val	35	40	45	
Phe	Gln	Ser	Thr	Glu	Val	Lys	His	Val	Thr	Lys	Val	Glu	Trp	Ile	Phe	50	55	60	
Ser	Gly	Arg	Arg	Ala	Lys	Glu	Glu	Ile	Val	Phe	Arg	Tyr	Tyr	His	Lys	65	70	75	80
Leu	Arg	Met	Ser	Ala	Glu	Tyr	Ser	Gln	Ser	Trp	Gly	His	Phe	Gln	Asn	85	90	95	
Arg	Val	Asn	Leu	Val	Gly	Asp	Ile	Phe	Arg	Asn	Asp	Gly	Ser	Ile	Met	100	105	110	
Leu	Gln	Gly	Val	Arg	Glu	Ser	Asp	Gly	Gly	Asn	Tyr	Thr	Cys	Ser	Ile	115	120	125	
His	Leu	Gly	Asn	Leu	Val	Phe	Lys	Lys	Thr	Ile	Val	Leu	His	Val	Ser	130	135	140	
Pro	Glu	Glu	Pro	Arg	Thr	Leu	Val	Thr	Pro	Ala	Ala	Leu	Arg	Pro	Leu	145	150	155	160
Val	Leu	Gly	Gly	Asn	Gln	Leu	Val	Ile	Ile	Val	Gly	Ile	Val	Cys	Ala	165	170	175	
Thr	Ile	Leu	Leu	Leu	Pro	Val	Leu	Ile	Leu	Ile	Val	Lys	Lys	Thr	Cys	180	185	190	
Gly	Asn	Lys	Ser	Ser	Val	Asn	Ser	Thr	Val	Leu	Val	Lys	Asn	Thr	Lys	195	200	205	
Lys	Thr	Asn	Pro	Glu	Met	Lys	Glu	Lys	Pro	Cys	His	Phe	Glu	Arg	Cys	210	215	220	
Glu	Gly	Glu	Val	Asn	Thr	Arg	Phe	Ser	Leu	Lys	His					225	230	235	

<210> 4029

<211> 909

<212> DNA

<213> Homo sapiens

<400> 4029

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 ctacatgctg ctgctggtgc tgccgtgcgt ggcgctcagc gaggtcagca tgcagggcga  
 180  
 gcacatagcg ccgcagaaga tgatgctgta cccggtgctc agtctcgcca ccgtcaatgt  
 240  
 ggtgggcccgt gctggcgcg cccgccaaca tggcgctggt ccgggacagc cgtgtctcgg  
 300  
 ccatcttcgt cggcaaaaac gtggtggcgc tcgccaccaa ggcctgcacc tnntcctgga  
 360  
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 420  
 ccacccccgc agcgcaactc ggtgccgccg ccgcgcgcgc cgctgcacgg cccgcctggg  
 480  
 ncgccccac atgtcctcgc ccacgcgtga cccctggac acgtgacagg gcccgcgcgg  
 540  
 cccccgacac gcccctgggg cgcagagaca ccgggttggc ttggggcgcg cggtttgcg  
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 660  
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 720  
 accagccgc cccagcgcgt gggctctgtt gggaggcctg ggccggagca gagcagaggt  
 780  
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 840  
 ctgctccttc ggtggggggc tctggctcag atttggggcc aaggaggcct ctgtcatttt  
 900  
 aaagactcg  
 909

&lt;210&gt; 4030

&lt;211&gt; 169

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4030

Arg	Pro	Pro	Val	Leu	Gly	Gly	Ala	Gly	Pro	Ala	Gly	Pro	Ala	Gly	His
1				5				10						15	
Ala	Gly	Gln	Pro	Val	Gly	Ala	Ala	Ala	Leu	Arg	Ala	Ala	Ala	Val	Gly
			20					25						30	
Arg	Gly	Pro	His	Leu	Leu	Leu	Leu	Leu	His	Ala	Ala	Ala	Gly	Ala	Ala
			35					40					45		
Val	Arg	Gly	Ala	Gln	Arg	Gly	Gln	His	Ala	Gly	Arg	Ala	His	Ser	Ala
			50					55					60		
Ala	Glu	Asp	Asp	Ala	Val	Pro	Gly	Ala	Gln	Ser	Arg	His	Arg	Gln	Cys
65				70					75					80	
Gly	Gly	Pro	Cys	Trp	Arg	Ala	Pro	Pro	Thr	Trp	Arg	Cys	Ser	Gly	Thr
			85						90					95	
Ala	Val	Ser	Arg	Pro	Ser	Ser	Ser	Ala	Lys	Thr	Trp	Trp	Arg	Ser	Pro
			100					105						110	
Pro	Arg	Pro	Ala	Pro	Xaa	Pro	Gly	Val	Pro	Pro	Pro	Gly	Ala	Arg	Leu



115	120	125
Pro Xaa Pro Pro Ala Leu Ser Leu Glu Leu Gln	Pro Pro Pro Pro Gln	
130	135	140
Arg Asn Ser Val Pro Pro Pro Pro Pro Leu	His Gly Pro Pro Gly	
145	150	155
Xaa Pro Pro His Val Leu Ala His Ala		160
165		

<210> 4031  
 <211> 1406  
 <212> DNA  
 <213> Homo sapiens

<400> 4031  
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 120  
 gagtttataaa aggaggagat gaggaagcta caaaaggaac gtaaagtttt tgaaaagtat  
 180  
 actacagctg caagaacttt tccagataaa aaggaacgtg aagaaataca gactttaaaa  
 240  
 cagcaaatag cagatttacg ggaagatttg aaaagaaagg agaccaaata gtcaagtaca  
 300  
 cacagccgtc tcagaagcca gatacaaatg ttagtcagag agaacacaga cctccgggaa  
 360  
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 420  
 agcagcctcg aggtggagaa gaaggacaag cttgcgaaca catctgttcg atttcaaaac  
 480  
 agtcagattt cttcaggaac ccaggtagaa aaatacaaga aaaattatct tccaatgcaa  
 540  
 ggcaatccac ctcgaagatc caagtctgca cctcctcgtg atttaggcaa tttggataag  
 600  
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 660  
 aaagaggagg aggaagacca agacatacag ggagaaatca gtcacacctga tggaaagggtg  
 720  
 gaaaagggtt ataagaatgg gtgccgtgtt atactgtttc ccaatggaac tcgaaaggaa  
 780  
 gtgagtgcag atgggaagac catcactgtc actttcttta atggtgacgt gaagcaggtc  
 840  
 atgccagacc aaagagtgat ctactactat gcagctgccc agaccactca cacgacatac  
 900  
 ccggaggggac tggaaagtctt acatttctca agtggacaaa tagaaaaaca ttaccagat  
 960  
 ggaagaaaag aaatcacgtt tcctgaccag actgttaaaa acttatttcc tgatggacaa  
 1020  
 gaagaaagca ttttcccaga tgggtacaatt gtcagagtac aacgtgatgg caacaaactc  
 1080  
 atagagttaa ataatggcca aagagaacta catactgccc agttcaagag acgggaatac  
 1140  
 ccagatggca ctgttaaaac cgtatatgca aacggtcac aagaaacgaa gtacagatcc  
 1200



ggtcggataa gagttaagga caaggagggt aatgtgctaa tggacacgga gctgtgacga  
 1260  
 tcctcatgtg atcatgaagt aacagtaact gactttttat gttaaaaaat gtacatttac  
 1320  
 tgtggattct gtttaattta ttgtgtatgt gtggggaaaa gattggattc taaaataaaa  
 1380  
 gtttaccctg tggcaaaaaa aaaaaa  
 1406

<210> 4032

<211> 418

<212> PRT

<213> Homo sapiens

<400> 4032

Xaa	Ala	Glu	Asn	Ala	Ser	Leu	Ala	Lys	Leu	Arg	Ile	Glu	Arg	Glu	Ser
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Ala	Leu	Glu	Lys	Leu	Arg	Lys	Glu	Ile	Ala	Gly	Phe	Glu	Gln	Gln	Lys
			20					25					30		
Ala	Lys	Glu	Leu	Ala	Arg	Ile	Glu	Glu	Phe	Lys	Lys	Glu	Glu	Met	Arg
		35					40					45			
Lys	Leu	Gln	Lys	Glu	Arg	Lys	Val	Phe	Glu	Lys	Tyr	Thr	Thr	Ala	Ala
	50					55					60				
Arg	Thr	Phe	Pro	Asp	Lys	Lys	Glu	Arg	Glu	Glu	Ile	Gln	Thr	Leu	Lys
65					70					75				80	
Gln	Gln	Ile	Ala	Asp	Leu	Arg	Glu	Asp	Leu	Lys	Arg	Lys	Glu	Thr	Lys
			85					90					95		
Trp	Ser	Ser	Thr	His	Ser	Arg	Leu	Arg	Ser	Gln	Ile	Gln	Met	Leu	Val
			100					105					110		
Arg	Glu	Asn	Thr	Asp	Leu	Arg	Glu	Glu	Ile	Lys	Val	Met	Glu	Arg	Phe
	115						120					125			
Arg	Leu	Asp	Ala	Trp	Lys	Arg	Ala	Glu	Ala	Ile	Glu	Ser	Ser	Leu	Glu
	130					135					140				
Val	Glu	Lys	Lys	Asp	Lys	Leu	Ala	Asn	Thr	Ser	Val	Arg	Phe	Gln	Asn
145					150					155				160	
Ser	Gln	Ile	Ser	Ser	Gly	Thr	Gln	Val	Glu	Lys	Tyr	Lys	Lys	Asn	Tyr
			165					170					175		
Leu	Pro	Met	Gln	Gly	Asn	Pro	Pro	Arg	Arg	Ser	Lys	Ser	Ala	Pro	Pro
		180						185					190		
Arg	Asp	Leu	Gly	Asn	Leu	Asp	Lys	Gly	Gln	Ala	Ala	Ser	Pro	Arg	Glu
	195						200					205			
Pro	Leu	Glu	Pro	Leu	Asn	Phe	Pro	Asp	Pro	Glu	Tyr	Lys	Glu	Glu	Glu
	210					215					220				
Glu	Asp	Gln	Asp	Ile	Gln	Gly	Glu	Ile	Ser	His	Pro	Asp	Gly	Lys	Val
225					230					235				240	
Glu	Lys	Val	Tyr	Lys	Asn	Gly	Cys	Arg	Val	Ile	Leu	Phe	Pro	Asn	Gly
			245					250					255		
Thr	Arg	Lys	Glu	Val	Ser	Ala	Asp	Gly	Lys	Thr	Ile	Thr	Val	Thr	Phe
		260						265					270		
Phe	Asn	Gly	Asp	Val	Lys	Gln	Val	Met	Pro	Asp	Gln	Arg	Val	Ile	Tyr
	275						280					285			
Tyr	Tyr	Ala	Ala	Ala	Gln	Thr	Thr	His	Thr	Thr	Tyr	Pro	Glu	Gly	Leu
	290					295					300				
Glu	Val	Leu	His	Phe	Ser	Ser	Gly	Gln	Ile	Glu	Lys	His	Tyr	Pro	Asp

305                                      310                                      315                                      320  
 Gly Arg Lys Glu Ile Thr Phe Pro Asp Gln Thr Val Lys Asn Leu Phe  
    325                                      330                                      335  
 Pro Asp Gly Gln Glu Glu Ser Ile Phe Pro Asp Gly Thr Ile Val Arg  
    340                                      345                                      350  
 Val Gln Arg Asp Gly Asn Lys Leu Ile Glu Phe Asn Asn Gly Gln Arg  
    355                                      360                                      365  
 Glu Leu His Thr Ala Gln Phe Lys Arg Arg Glu Tyr Pro Asp Gly Thr  
    370                                      375                                      380  
 Val Lys Thr Val Tyr Ala Asn Gly His Gln Glu Thr Lys Tyr Arg Ser  
 385                                      390                                      395                                      400  
 Gly Arg Ile Arg Val Lys Asp Lys Glu Gly Asn Val Leu Met Asp Thr  
    405                                      410                                      415  
 Glu Leu

<210> 4033  
 <211> 487  
 <212> DNA  
 <213> Homo sapiens

<400> 4033  
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 120  
 tcaagaagag ccctcctagt ttggcctcta actggctgtg cgaccccagg caggtcactt  
 180  
 gtcctctctg ggaagcagct gaataatgaa cactgggatt ttcccaggct ggcttctcac  
 240  
 tgcagagcag aggaaaagca ttctgggggc ctgctatgga gggtcattta tccagtttac  
 300  
 aacttccacg gccggccctc aatggcttcc tttctctccc acaagagcgc tgggccaagc  
 360  
 cagctctgca ccagttggac gccttccaag aaaaactcag gctccggggg ctgcttgtca  
 420  
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 480  
 ccagtcc  
 487

<210> 4034  
 <211> 94  
 <212> PRT  
 <213> Homo sapiens

<400> 4034  
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 Lys Ser Ile Leu Gly Ala Cys Tyr Gly Gly Ser Phe Ile Gln Phe Thr  
    20                                      25                                      30  
 Thr Ser Thr Ala Gly Pro Gln Trp Leu Pro Phe Ser Pro Thr Arg Ala  
    35                                      40                                      45  
 Leu Gly Gln Ala Ser Ser Ala Pro Val Gly Arg Leu Pro Arg Lys Thr

50 55 60  
 Gln Ala Pro Gly Ala Ala Cys Gln Asp Gln Thr Gly Gly Leu Ala Pro  
 65 70 75 80  
 Pro Pro Ala Met Cys Gly Glu Arg Ala Ser Pro Ser Gln Ser  
 85 90

<210> 4035  
 <211> 343  
 <212> DNA  
 <213> Homo sapiens

<400> 4035  
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 120  
 tcctatggga gggacaaact ctcagaaaat agcaagagta ttttggaaatc ctatctgagg  
 180  
 tataaacact cagaacctca tagcagtgtt caggaatcct atgtgaggga caaacattca  
 240  
 gaccacagca ggagcattct agaatcctat ttgaggaaca aacattcaga caatcgtagc  
 300  
 agtgttctgg aatccttttt ttttttgaag ctttcaatct ctt  
 343

<210> 4036  
 <211> 114  
 <212> PRT  
 <213> Homo sapiens

<400> 4036  
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 Asp Asn Pro Ser Asn Val Leu Glu Ser Tyr Val Arg Asp Lys His Ser  
 20 25 30  
 Asp Pro Ser Ser Asn Val Leu Glu Ser Tyr Gly Arg Asp Lys Leu Ser  
 35 40 45  
 Glu Asn Ser Lys Ser Ile Leu Glu Ser Tyr Leu Arg Tyr Lys His Ser  
 50 55 60  
 Glu Pro His Ser Ser Val Gln Glu Ser Tyr Val Arg Asp Lys His Ser  
 65 70 75 80  
 Asp His Ser Arg Ser Ile Leu Glu Ser Tyr Leu Arg Asn Lys His Ser  
 85 90 95  
 Asp Asn Arg Ser Ser Val Leu Glu Ser Phe Phe Phe Leu Lys Leu Ser  
 100 105 110  
 Ile Ser

<210> 4037  
 <211> 741  
 <212> DNA  
 <213> Homo sapiens

<400> 4037

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 120  
 ggaggagaag gggttggtct tgctgtctca gggcggcaga ggcagaagag aatctgagca  
 180  
 tacgtggacc tgtagccagg tgggcataga taaaaggaaa tattgtttgc cagtccttgc  
 240  
 tggaatgatg cctttacaca tctgtctgat ctgattgctc cactgttttc tgacttctct  
 300  
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 360  
 agatacaact gcatggctcc ttccttgccg caagagaggt ttgcctttaa gatctcacca  
 420  
 aagcccagca aaccactgag gccttgtatt cagctgagca gcaagaatga agccagtgga  
 480  
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 caggggctgg ccctgacaat ggtcaaagtg ttctcggaat tcgatgaccc gctagatatg  
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 660  
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 720  
 caggccgacc acgtctgcct t  
 741

&lt;210&gt; 4038

&lt;211&gt; 134

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4038

Met	Ala	Val	Asp	Ile	Glu	Tyr	Arg	Tyr	Asn	Cys	Met	Ala	Pro	Ser	Leu
1				5					10					15	
Arg	Gln	Glu	Arg	Phe	Ala	Phe	Lys	Ile	Ser	Pro	Lys	Pro	Ser	Lys	Pro
			20					25					30		
Leu	Arg	Pro	Cys	Ile	Gln	Leu	Ser	Ser	Lys	Asn	Glu	Ala	Ser	Gly	Met
		35					40					45			
Val	Ala	Pro	Ala	Val	Gln	Glu	Lys	Lys	Val	Lys	Lys	Arg	Val	Ser	Phe
	50					55					60				
Ala	Asp	Asn	Gln	Gly	Leu	Ala	Leu	Thr	Met	Val	Lys	Val	Phe	Ser	Glu
65					70				75					80	
Phe	Asp	Asp	Pro	Leu	Asp	Met	Pro	Phe	Asn	Ile	Thr	Glu	Leu	Leu	Asp
			85					90					95		
Asn	Ile	Val	Ser	Leu	Thr	Thr	Ala	Glu	Ser	Glu	Ser	Phe	Val	Leu	Asp
			100					105					110		
Phe	Ser	Gln	Pro	Ser	Ala	Asp	Tyr	Leu	Asp	Phe	Arg	Asn	Arg	Leu	Gln
		115					120					125			
Ala	Asp	His	Val	Cys	Leu										

&lt;210&gt; 4039

&lt;211&gt; 1503

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4039

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60  
gctgcgcgcg tcggagagggc tcctggggaa actcccacgg cccagggact ttcgaaagca  
120  
gagcgaggag ccctcgcacg cgctagtctg cgagtgagcg ctcagcccgg cacctgttcc  
180  
tccagcgccg ccgccttccc acccctcgga cccgcgcccgc tcgcgggcgcc cgcccgttcc  
240  
tgcatgaat ccggccctag gcaaccagac ggacgtggcg ggcttctctg gccaacagca  
300  
gcgagggcgt ggagcgagcc gtgcgctgct gcacccaggc gtccgtgggtg accgacgacg  
360  
gcttcgcgga gggaggcccc gacgagcgta gctgtacat aatgcgcgtg gtgcagatcg  
420  
cggtcattgt cgtgctctca ctcaccgtgg tcttcggcat cttcttcttc ggctgcaatc  
480  
tgctcatcaa gtccgagggc atgatcaact tcctcgtgaa ggaccggagg ccgtctaagg  
540  
aggtggaggc ggtggtcgtg gggccctact gacccgccct ctgccccgcg ggcaaccgct  
600  
cccacgcctg ccacttttgc tagcccggct gtgcccctca ctatcagaga ctgggcgaag  
660  
caaacctgtc ggagtcaatt atttctctcg acttcggcct ttcggaaaga agcgaccggt  
720  
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780  
gaactcagca gaaagtggca agaagagggc gattagggcg cagaactttg gaagctgcta  
840  
cttacttgga atgcggggag accgacggtg cgaaggccct tctccacccg caggtggggc  
900  
aagctctggg ggcaggtgga gagggcgggc aggggagaga cccagcggca ctgatcgccct  
960  
tgtgaccgga agagtgcct gttaaaagcc acgcagcaga ctcattggggc ctcacaaatc  
1020  
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1080  
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<212> PRT  
<213> Homo sapiens

<400> 4040  
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Ser Leu Arg Val Ser Ala Gln Pro Gly Thr Cys Ser Ser Ser Ala Ala  
35 40 45  
Ala Phe Pro Pro Leu Gly Pro Ala Pro Leu Ala Ala Pro Ala Arg Ser  
50 55 60  
Cys Asp Glu Ser Gly Pro Arg Gln Pro Asp Gly Arg Gly Gly Pro Ser  
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Trp Pro Thr Ala Ala Arg Arg Trp Ser Glu Pro Cys Ala Ala Ala Pro  
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<210> 4041  
<211> 573  
<212> DNA  
<213> Homo sapiens

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573

<210> 4042  
<211> 191  
<212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4042

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 Asp His Arg Gln Glu Leu Ile Glu Cys Val Ala Asn Ser Asp Glu Gln  
 35 40 45  
 Leu Gly Glu Met Phe Leu Glu Glu Lys Ile Pro Ser Ile Ser Asp Leu  
 50 55 60  
 Lys Leu Ala Ile Arg Arg Ala Thr Leu Lys Arg Ser Phe Thr Pro Val  
 65 70 75 80  
 Phe Leu Gly Ser Ala Leu Lys Asn Lys Gly Val Gln Pro Leu Leu Asp  
 85 90 95  
 Ala Val Leu Glu Tyr Leu Pro Asn Pro Ser Glu Val Gln Asn Tyr Ala  
 100 105 110  
 Ile Leu Asn Lys Glu Asp Asp Ser Lys Glu Lys Thr Lys Ile Leu Met  
 115 120 125  
 Asn Ser Ser Arg Asp Asn Ser His Pro Phe Val Gly Leu Ala Phe Lys  
 130 135 140  
 Leu Glu Val Gly Arg Phe Gly Gln Leu Thr Tyr Val Arg Ser Tyr Gln  
 145 150 155 160  
 Gly Glu Leu Lys Lys Gly Asp Thr Ile Tyr Asn Thr Arg Thr Arg Lys  
 165 170 175  
 Lys Val Arg Leu Gln Arg Leu Ala Arg Met His Ala Asp Met Met  
 180 185 190

&lt;210&gt; 4043

&lt;211&gt; 744

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4043

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 240  
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 300  
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<210> 4044

<211> 219

<212> PRT

<213> Homo sapiens

<400> 4044

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			20					25					30		
Arg	Lys	Glu	Glu	Glu	Leu	Arg	Arg	Lys	Ala	Leu	Glu	Glu	Lys	Arg	Arg
		35					40					45			
Lys	Glu	Glu	Leu	Val	Lys	Lys	Arg	Ile	Glu	Leu	Lys	His	Asp	Lys	Lys
	50					55					60				
Ala	Arg	Ala	Met	Ala	Lys	Arg	Thr	Lys	Asp	Asn	Phe	His	Gly	Tyr	Asn
65				70					75					80	
Gly	Ile	Pro	Ile	Glu	Glu	Lys	Ser	Lys	Lys	Arg	Gln	Ala	Thr	Glu	Ser
			85					90						95	
His	Thr	Ser	Gln	Gly	Thr	Asp	Arg	Glu	Tyr	Glu	Met	Glu	Glu	Glu	Asn
			100				105						110		
Glu	Phe	Leu	Glu	Tyr	Asn	His	Ala	Glu	Ser	Glu	Gln	Glu	Tyr	Glu	Glu
		115					120					125			
Glu	Gln	Glu	Pro	Pro	Lys	Val	Glu	Ser	Lys	Pro	Lys	Val	Ser	Leu	Lys
	130					135						140			
Gly	Ala	Pro	Pro	Pro	Met	Asn	Phe	Thr	Asp	Leu	Leu	Arg	Leu	Ala	Glu
145					150				155					160	
Lys	Lys	Gln	Phe	Glu	Pro	Val	Glu	Ile	Lys	Val	Val	Lys	Lys	Ser	Glu
			165					170						175	
Glu	Arg	Pro	Met	Thr	Ala	Glu	Glu	Leu	Arg	Glu	Arg	Glu	Phe	Leu	Glu
		180					185						190		
Arg	Lys	His	Arg	Arg	Lys	Lys	Leu	Glu	Thr	Asp	Gly	Lys	Leu	Pro	Pro
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Thr	Val	Ser	Lys	Lys	Ala	Pro	Leu	Gly	Arg	Lys					
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<210> 4045

<211> 2217

<212> DNA

<213> Homo sapiens

<400> 4045

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gttaatgaca ccaagctggg actggtacag aaagtcagag aacacttaca gaacttggaa  
240  
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420  
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720  
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<210> 4046

<211> 437

<212> PRT

<213> Homo sapiens

<400> 4046

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			20					25					30		
His	Leu	Gln	Asn	Leu	Glu	Asn	Ser	Ala	Phe	Thr	Ala	Asp	Arg	His	Lys
		35				40					45				
Lys	Arg	Lys	Leu	Leu	Glu	Asn	Ser	Thr	Leu	Asn	Ser	Lys	Leu	Leu	Lys
	50					55					60				
Val	Asn	Gly	Ser	Thr	Thr	Ala	Ile	Cys	Ala	Thr	Gly	Leu	Arg	Asn	Leu
65					70				75					80	
Gly	Asn	Thr	Cys	Phe	Met	Asn	Ala	Ile	Leu	Gln	Ser	Leu	Ser	Asn	Ile
			85					90						95	
Glu	Gln	Phe	Cys	Cys	Tyr	Phe	Lys	Glu	Leu	Pro	Ala	Val	Glu	Leu	Arg
		100						105					110		
Asn	Gly	Lys	Thr	Ala	Gly	Arg	Arg	Thr	Tyr	His	Thr	Arg	Ser	Gln	Gly
		115				120						125			
Asp	Asn	Asn	Val	Ser	Leu	Val	Glu	Glu	Phe	Arg	Lys	Thr	Leu	Cys	Ala
	130					135					140				
Leu	Trp	Gln	Gly	Ser	Gln	Thr	Ala	Phe	Ser	Pro	Glu	Ser	Leu	Phe	Tyr
145					150				155					160	
Val	Val	Trp	Lys	Ile	Met	Pro	Asn	Phe	Arg	Gly	Tyr	Gln	Gln	Gln	Asp
			165					170						175	
Ala	His	Glu	Phe	Xaa	Ala	Leu	Pro	Phe	Gly	Pro	Pro	Thr	Leu	Gly	Xaa
		180						185					190		
Phe	Arg	Ala	Val	Ser	Thr	Val	Phe	Pro	Ala	Gln	Gln	Phe	Cys	Arg	Arg
	195						200					205			
Ile	Leu	Leu	Cys	Leu	Gln	Val	Xaa	Lys	Cys	Cys	Ile	Asn	Gly	Ala	Ser
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Thr	Val	Val	Thr	Ala	Ile	Phe	Gly	Gly	Ile	Leu	Gln	Asn	Glu	Val	Asn
225					230				235					240	
Cys	Leu	Ile	Cys	Gly	Thr	Glu	Ser	Arg	Lys	Phe	Asp	Pro	Phe	Leu	Asp
			245					250						255	
Leu	Ser	Leu	Asp	Ile	Pro	Ser	Gln	Phe	Arg	Ser	Lys	Arg	Ser	Lys	Asn

	260		265		270										
Gln	Glu	Asn	Gly	Pro	Val	Cys	Ser	Leu	Arg	Asp	Cys	Leu	Arg	Ser	Phe
	275						280						285		
Thr	Asp	Leu	Glu	Glu	Leu	Asp	Glu	Thr	Glu	Leu	Tyr	Met	Cys	His	Lys
	290						295						300		
Cys	Lys	Xaa	Lys	Gln	Lys	Ser	Thr	Lys	Lys	Phe	Trp	Ile	Gln	Lys	Leu
305					310						315				320
Pro	Lys	Val	Leu	Cys	Leu	His	Leu	Lys	Arg	Phe	His	Trp	Thr	Ala	Tyr
					325						330				335
Leu	Arg	Asn	Lys	Val	Asp	Thr	Tyr	Val	Glu	Phe	Pro	Leu	Arg	Gly	Leu
					340						345				350
Asp	Met	Lys	Cys	Tyr	Leu	Leu	Asp	Pro	Glu	Asn	Ser	Gly	Pro	Glu	Ser
					355								365		
Cys	Leu	Tyr	Asp	Leu	Ala	Ala	Val	Val	Val	His	His	Gly	Ser	Gly	Val
					370								380		
Gly	Ser	Gly	His	Tyr	Thr	Ala	Tyr	Ala	Thr	His	Glu	Gly	Arg	Trp	Phe
385					390						395				400
His	Phe	Asn	Asp	Ser	Thr	Val	Thr	Leu	Thr	Asp	Glu	Glu	Thr	Val	Val
					405						410				415
Lys	Ala	Lys	Ala	Asn	Ile	Leu	Phe	Tyr	Val	Glu	His	Gln	Ala	Lys	Ala
					420						425				430
Gly	Ser	Asp	Lys	Leu											
					435										

&lt;210&gt; 4047

&lt;211&gt; 809

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4047

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120  
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420  
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540  
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600  
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660  
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720

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<210> 4048

<211> 118

<212> PRT

<213> Homo sapiens

<400> 4048

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			20					25					30		
Val	Ala	Ile	Gly	Phe	Thr	Gly	Gly	Leu	Val	Phe	Met	Tyr	Val	Gln	Cys
		35					40				45				
Lys	Val	Tyr	Val	Gln	Leu	Trp	Arg	Arg	Leu	Lys	Ala	Tyr	Asn	Arg	Val
	50					55				60					
Ile	Phe	Val	Gln	Asn	Cys	Pro	Asp	Thr	Ala	Lys	Lys	Leu	Glu	Lys	Asn
65				70					75					80	
Phe	Ser	Cys	Asn	Val	Asn	Thr	Asp	Ile	Lys	Asp	Ala	Val	Val	Val	Pro
			85						90				95		
Val	Pro	Gln	Thr	Gly	Ala	Asn	Ser	Leu	Pro	Ser	Ala	Glu	Gly	Gly	Pro
			100					105					110		
Pro	Glu	Val	Val	Ser	Val										
			115												

<210> 4049

<211> 1211

<212> DNA

<213> Homo sapiens

<400> 4049

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420  
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600

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&lt;210&gt; 4050

&lt;211&gt; 403

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4050

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			20					25					30		
Phe	Glu	Gly	His	Lys	Leu	Ile	Ala	His	Trp	Phe	Arg	Gly	Tyr	Leu	Ile
		35					40					45			
Ile	Val	Ser	Arg	Asp	Arg	Lys	Val	Ser	Pro	Lys	Ser	Glu	Phe	Thr	Ser
	50					55					60				
Arg	Asp	Ser	Gln	Ser	Ser	Asp	Lys	Gln	Ile	Leu	Asn	Ile	Tyr	Asp	Leu
65					70					75				80	
Cys	Asn	Lys	Phe	Ile	Ala	Tyr	Ser	Thr	Val	Phe	Glu	Asp	Val	Val	Asp
			85						90					95	
Val	Leu	Ala	Glu	Trp	Gly	Ser	Leu	Tyr	Val	Leu	Thr	Arg	Asp	Gly	Arg
		100						105					110		
Val	His	Ala	Leu	Gln	Glu	Lys	Asp	Thr	Gln	Thr	Lys	Leu	Glu	Met	Leu
		115					120					125			
Phe	Lys	Lys	Asn	Leu	Phe	Glu	Met	Ala	Ile	Asn	Leu	Ala	Lys	Ser	Gln
	130					135					140				
His	Leu	Asp	Ser	Asp	Gly	Leu	Ala	Gln	Ile	Phe	Met	Gln	Tyr	Gly	Asp
145				150						155				160	
His	Leu	Tyr	Ser	Lys	Gly	Asn	His	Asp	Gly	Ala	Val	Gln	Gln	Tyr	Ile
			165					170						175	
Arg	Thr	Ile	Gly	Lys	Leu	Glu	Pro	Ser	Tyr	Val	Ile	Arg	Lys	Phe	Leu
		180						185					190		
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Cys	Phe	Ala	Ser	Leu	Ala	Asp	Arg	Phe	Thr	Arg	Arg	Gly	Val	Asp	Pro	
		35					40					45				
Ala	Pro	Leu	Ala	Lys	His	Gly	Leu	Thr	Glu	Glu	Leu	Leu	Ser	Arg	Met	
	50					55					60					
Ala	Ala	Ala	Gly	Gly	Thr	Val	Ser	Gly	Pro	Ser	Ser	Ala	Cys	Lys	Pro	
65					70				75					80		
Gly	Arg	Ser	Thr	Thr	Gly	Ala	Pro	Ser	Thr	Thr	Ala	Asp	Ser	Lys	Leu	
				85					90					95		
Ser	Asn	Gln	Val	Ser	Thr	Ile	Val	Ser	Leu	Leu	Ser	Thr	Leu	Cys	Arg	
			100					105						110		
Gly	Ser	Pro	Val	Val	Thr	His	Asp	Leu	Leu	Arg	Ser	Glu	Leu	Pro	Asp	
	115						120					125				
Ser	Ile	Glu	Ser	Ala	Leu	Gln	Gly	Asp	Glu	Arg	Cys	Val	Leu	Asp	Thr	
	130					135					140					
Met	Arg	Leu	Val	Asp	Leu	Leu	Leu	Val	Leu	Leu	Phe	Glu	Gly	Arg	Lys	
145					150				155						160	
Ala	Leu	Pro	Lys	Ser	Ser	Ala	Gly	Ser	Thr	Gly	Arg	Ile	Pro	Gly	Leu	
				165					170					175		
Arg	Arg	Leu	Asp	Ser	Ser	Gly	Glu	Arg	Ser	His	Arg	Gln	Leu	Ile	Asp	
			180					185					190			
Cys	Ile	Arg	Ser	Lys	Asp	Thr	Asp	Ala	Leu	Ile	Asp	Ala	Ile	Asp	Thr	
	195						200					205				
Gly	Ala	Phe	Glu	Val	Asn	Phe	Met	Asp	Asp	Val	Gly	Gln	Thr	Leu	Leu	
	210					215					220					
Asn	Trp	Ala	Ser	Ala	Phe	Gly	Thr	Gln	Glu	Met	Val	Glu	Phe	Leu	Cys	
225					230				235					240		
Glu	Arg	Gly	Ala	Asp	Val	Asn	Arg	Gly	Gln	Arg	Ser	Ser	Ser	Leu	His	
				245					250					255		
Tyr	Ala	Ala	Cys	Phe	Gly	Arg	Pro	Gln	Val	Ala	Lys	Thr	Leu	Leu	Arg	
			260					265					270			
His	Gly	Ala	Asn	Pro	Asp	Leu	Arg	Asp	Glu	Asp	Gly	Lys	Thr	Pro	Leu	
	275						280					285				
Asp	Lys	Ala	Arg	Glu	Arg	Gly	His	Ser	Glu	Val	Val	Ala	Ile	Leu	Gln	
	290					295					300					
Ser	Pro	Gly	Asp	Trp	Met	Cys	Pro	Val	Asn	Lys	Gly	Asp	Asp	Lys	Lys	

305					310					315				320	
Lys	Lys	Asp	Thr	Asn	Lys	Asp	Glu	Glu	Glu	Cys	Asn	Glu	Pro	Lys	Gly
				325					330					335	
Asp	Pro	Glu	Met	Ala	Pro	Ile	Tyr	Leu	Lys	Arg	Leu	Leu	Pro	Val	Phe
			340					345					350		
Ala	Gln	Thr	Phe	Gln	Gln	Thr	Met	Leu	Pro	Ser	Ile	Arg	Lys	Ala	Ser
		355					360					365			
Leu	Ala	Leu	Ile	Arg	Lys	Met	Ile	His	Phe	Cys	Ser	Glu	Ala	Leu	Leu
	370					375					380				
Lys	Glu	Val	Cys	Asp	Ser	Asp	Val	Gly	His	Asn	Leu	Pro	Thr	Ile	Leu
385					390					395					400
Val	Glu	Ile	Thr	Ala	Thr	Val	Leu	Asp	Gln	Glu	Asp	Asp	Asp	Asp	Gly
			405					410						415	
His	Leu	Leu	Ala	Leu	Gln	Ile	Ile	Arg	Asp	Leu	Val	Asp	Lys	Gly	Gly
			420					425					430		
Asp	Ile	Phe	Leu	Asp	Gln	Leu	Ala	Arg	Leu	Gly	Val	Ile	Ser	Lys	Val
	435						440					445			
Ser	Thr	Leu	Ala	Gly	Pro	Ser	Ser	Asp	Asp	Glu	Asn	Glu	Glu	Glu	Ser
	450					455					460				
Lys	Pro	Glu	Lys	Glu	Asp	Glu	Pro	Gln	Glu	Asp	Ala	Lys	Glu	Leu	Gln
465					470					475					480
Gln	Gly	Lys	Pro	Tyr	His	Trp	Arg	Asp	Trp	Ser	Ile	Ile	Arg	Gly	Arg
			485					490						495	
Asp	Cys	Leu	Tyr	Ile	Trp	Ser	Asp	Ala	Ala	Ala	Leu	Glu	Leu	Ser	Asn
		500						505					510		
Gly	Ser	Asn	Gly	Trp	Phe	Arg	Phe	Ile	Leu	Asp	Gly	Lys	Leu	Ala	Thr
		515					520					525			
Met	Tyr	Ser	Ser	Gly	Ser	Pro	Glu	Gly	Gly	Ser	Asp	Ser	Ser	Glu	Ser
	530					535					540				
Arg	Ser	Glu	Phe	Leu	Glu	Lys	Leu	Gln	Arg	Ala	Arg	Gly	Gln	Val	Lys
545					550					555					560
Pro	Ser	Thr	Ser	Ser	Gln	Pro	Ile	Leu	Ser	Ala	Pro	Gly	Pro	Thr	Lys
			565					570					575		
Leu	Thr	Val	Gly	Asn	Trp	Ser	Leu	Thr	Cys	Leu	Lys	Glu	Gly	Glu	Ile
		580						585					590		
Ala	Ile	His	Asn	Ser	Asp	Gly	Gln	Gln	Ala	Thr	Ile	Leu	Lys	Glu	Asp
		595				600						605			
Leu	Pro	Gly	Phe	Val	Phe	Glu	Ser	Asn	Arg	Gly	Thr	Lys	His	Ser	Phe
	610					615					620				
Thr	Ala	Glu	Thr	Ser	Leu	Gly	Ser	Glu	Phe	Val	Thr	Gly	Trp	Thr	Gly
625					630					635					640
Lys	Arg	Gly	Arg	Lys	Leu	Lys	Ser	Lys	Leu	Glu	Lys	Thr	Lys	Xaa	Lys
			645					650						655	
Val	Arg	Thr	Met	Ala	Arg	Asp	Leu	Tyr	Asp	Asp	His	Phe	Lys	Ala	Val
		660						665					670		
Glu	Ser	Met	Pro	Arg	Gly	Val	Val	Val	Thr	Leu	Arg	Asn	Ile	Ala	Thr
		675				680						685			
Gln	Leu	Glu	Ser	Ser	Trp	Glu	Leu	His	Thr	Asn	Arg	Gln	Cys	Ile	Glu
	690					695					700				
Ser	Glu	Asn	Thr	Trp	Arg	Asp	Leu	Met	Lys	Thr	Ala	Leu	Glu	Asn	Leu
705					710					715					720
Ile	Val	Leu	Leu	Lys	Asp	Glu	Asn	Thr	Ile	Ser	Pro	Tyr	Glu	Met	Cys
			725					730					735		
Ser	Ser	Gly	Leu	Val	Gln	Ala	Leu	Leu	Thr	Val	Leu	Asn	Asn	Ser	Met

3239

1170 1175 1180  
Ser Ser Leu Val Lys Asn Asn Cys Pro Asp Lys Thr Ser Ala Ala Ala  
1185 1190 1195 1200  
Gly Ser Ser Ser Arg Lys Gly Ser Ser Ser Ser Val Cys Ser Val Ala  
1205 1210 1215  
Ser Ser Ser Asp Ile Ser Leu Gly Ser Thr Lys Thr Glu Arg Arg Ser  
1220 1225 1230  
Glu Ile Val Met Glu His Ser Ile Val Ser Gly Ala Asp Val His Glu  
1235 1240 1245  
Pro Ile Val Val Leu Ser Ser Ala Glu Asn Val Pro Gln Thr Glu Val  
1250 1255 1260  
Gly Ser Ser Ser Ser Ala Ser Thr Ser Thr Leu Thr Ala Glu Thr Gly  
1265 1270 1275 1280  
Ser Glu Asn Ala Glu Arg Lys Leu Gly Pro Asp Ser Ser Val Arg Thr  
1285 1290 1295  
Pro Gly Glu Ser Ser Ala Ile Ser Met Gly Ile Val Ser Val Ser Ser  
1300 1305 1310  
Pro Asp Val Ser Ser Val Ser Glu Leu Thr Asn Lys Glu Ala Ala Ser  
1315 1320 1325  
Gln Arg Pro Leu Ser Ser Ser Ala Ser Asn Arg Leu Ser Val Ser Ser  
1330 1335 1340  
Leu Leu Ala Ala Gly Ala Pro Met Ser Ser Ser Ala Ser Val Pro Asn  
1345 1350 1355 1360  
Leu Ser Ser Arg Glu Thr Ser Ser Leu Glu Ser Phe Val Arg Arg Val  
1365 1370 1375  
Ala Asn Ile Ala Arg Thr Asn Ala Thr Asn Asn Met Asn Leu Ser Arg  
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Ser Ser Ser Asp Asn Asn Thr Asn Thr Leu Gly Arg Asn Val Met Ser  
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Thr Ala Thr Ser Pro Leu Met Gly Ala Gln Ser Phe Pro Asn Leu Thr  
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Thr Pro Gly Thr Thr Ser Thr Val Thr Met Ser Thr Ser Ser Val Thr  
1425 1430 1435 1440  
Ser Ser Ser Asn Val Ala Thr Ala Thr Thr Val Leu Ser Val Gly Gln  
1445 1450 1455  
Ser Leu Ser Asn Thr Leu Thr Thr Ser Leu Thr Ser Thr Ser Ser Glu  
1460 1465 1470  
Ser Asp Thr Gly Gln Glu Ala Glu Tyr Ser Leu Tyr Asp Phe Leu Asp  
1475 1480 1485  
Ser Cys Arg Ala Ser Thr Leu Leu Ala Glu Leu Asp Asp Asp Glu Asp  
1490 1495 1500  
Leu Pro Glu Pro Asp Glu Glu Asp Asp Glu Asn Glu Asp Asp Asn Gln  
1505 1510 1515 1520  
Glu Asp Gln Glu Tyr Glu Glu Val Met Ile Leu Arg Arg Pro Ser Leu  
1525 1530 1535  
Gln Arg Arg Ala Gly Ser Arg Ser Asp Val Thr His His Ala Val Thr  
1540 1545 1550  
Ser Gln Leu Pro Gln Val Pro Ala Gly Ala Gly Ser Arg Pro Ile Gly  
1555 1560 1565  
Glu Gln Glu Glu Glu Glu Tyr Glu Thr Lys Gly Gly Arg Arg Arg Thr  
1570 1575 1580  
Trp Asp Asp Asp Tyr Val Leu Lys Arg Gln Phe Ser Ala Leu Val Pro  
1585 1590 1595 1600  
Ala Phe Asp Pro Arg Pro Gly Arg Thr Asn Val Gln Gln Thr Thr Asp

	1605	1610	1615
Leu Glu Ile Pro Pro Pro Gly Thr Pro His Ser Glu Leu Leu Glu Glu			
	1620	1625	1630
Val Glu Cys Thr Pro Ser Pro Arg Leu Ala Leu Thr Leu Lys Val Thr			
	1635	1640	1645
Gly Leu Gly Thr Thr Arg Glu Val Glu Leu Pro Leu Thr Asn Phe Arg			
	1650	1655	1660
Ser Thr Ile Phe Tyr Tyr Val Gln Lys Leu Leu Gln Leu Ser Cys Asn			
1665	1670	1675	1680
Gly Asn Val Lys Ser Asp Lys Leu Arg Arg Ile Trp Glu Pro Thr Tyr			
	1685	1690	1695
Thr Ile Met Tyr Arg Glu Met Lys Asp Ser Asp Lys Glu Lys Glu Asn			
	1700	1705	1710
Gly Lys Met Gly Cys Trp Ser Ile Glu His Val Glu Gln Tyr Leu Gly			
	1715	1720	1725
Thr Asp Glu Leu Pro Lys Asn Asp Leu Ile Thr Tyr Leu Gln Lys Asn			
	1730	1735	1740
Ala Asp Ala Ala Phe Leu Arg His Trp Lys Leu Thr Gly Thr Asn Lys			
1745	1750	1755	1760
Ser Ile Arg Lys Asn Arg Asn Cys Ser Gln Leu Ile Ala Ala Tyr Lys			
	1765	1770	1775
Asp Phe Cys Glu His Gly Thr Lys Ser Gly Leu Asn Gln Gly Ala Ile			
	1780	1785	1790
Ser Thr Leu Gln Ser Ser Asp Ile Leu Asn Leu Thr Lys Glu Gln Pro			
	1795	1800	1805
Gln Ala Lys Ala Gly Asn Gly Gln Asn Ser Cys Gly Val Glu Asp Val			
	1810	1815	1820
Leu Gln Leu Leu Arg Ile Leu Tyr Ile Val Ala Ser Asp Pro Tyr Ser			
1825	1830	1835	1840
Arg Ile Ser Gln Glu Asp Gly Asp Glu Gln Pro Gln Phe Thr Phe Pro			
	1845	1850	1855
Pro Asp Glu Phe Thr Ser Lys Lys Ile Thr Thr Lys Ile Leu Gln Gln			
	1860	1865	1870
Ile Glu Glu Pro Leu Ala Leu Ala Ser Gly Ala Leu Pro Asp Trp Cys			
	1875	1880	1885
Glu Gln Leu Thr Ser Lys Cys Pro Phe Leu Ile Pro Phe Glu Thr Arg			
	1890	1895	1900
Gln Leu Tyr Phe Thr Cys Thr Ser Phe Gly Ala Ser Arg Ala Ile Val			
1905	1910	1915	1920
Trp Leu Gln Asn Arg Arg Glu Ala Thr Val Glu Arg Thr Arg Thr Thr			
	1925	1930	1935
Ser Ser Val Arg Arg Asp Asp Pro Gly Glu Phe Arg Val Gly Arg Leu			
	1940	1945	1950
Lys His Glu Arg Val Lys Val Pro Arg Gly Glu Ser Leu Met Glu Trp			
	1955	1960	1965
Ala Glu Asn Val Met Gln Ile His Ala Asp Arg Lys Ser Val Leu Glu			
	1970	1975	1980
Val Glu Phe Leu Gly Glu Glu Gly Thr Gly Leu Gly Pro Thr Leu Glu			
1985	1990	1995	2000
Phe Tyr Ala Leu Val Ala Ala Glu Phe Gln Arg Thr Asp Leu Gly Ala			
	2005	2010	2015
Trp Leu Cys Asp Asp Asn Phe Pro Asp Asp Glu Ser Arg His Val Asp			
	2020	2025	2030
Leu Gly Gly Gly Leu Lys Pro Pro Gly Tyr Tyr Val Gln Arg Ser Cys			

2035	2040	2045
Gly Leu Phe Thr Ala Pro Phe	Pro Gln Asp Ser Asp Glu Leu Glu Arg	
2050	2055	2060
Ile Thr Lys Leu Phe His Phe	Leu Gly Ile Phe Leu Ala Lys Cys Ile	
2065	2070	2075
Gln Asp Asn Arg Leu Val Asp	Leu Pro Ile Ser Lys Pro Phe Phe Lys	2080
2085	2090	2095
Leu Met Cys Met Gly Asp Ile	Lys Ser Asn Met Ser Lys Leu Ile Tyr	
2100	2105	2110
Glu Ser Arg Gly Asp Arg Asp	Leu His Cys Thr Glu Ser Gln Ser Glu	
2115	2120	2125
Ala Ser Thr Glu Glu Gly His	Asp Ser Leu Ser Val Gly Ser Phe Glu	
2130	2135	2140
Glu Asp Ser Lys Ser Glu Phe	Ile Leu Asp Pro Pro Lys Pro Lys Pro	
2145	2150	2155
Pro Ala Trp Leu Asn Gly Ile	Leu Thr Trp Glu Asp Phe Glu Leu Val	
2165	2170	2175
Asn Pro His Arg Ala Arg Phe	Leu Lys Glu Ile Lys Asp Leu Ala Ile	
2180	2185	2190
Lys Arg Arg Gln Ile Leu Ser	Asn Lys Gly Leu Ser Glu Asp Glu Lys	
2195	2200	2205
Asn Thr Lys Leu Gln Glu Leu	Val Leu Lys Asn Pro Ser Gly Ser Gly	
2210	2215	2220
Pro Pro Leu Ser Ile Glu Asp	Leu Gly Leu Asn Phe Gln Phe Cys Pro	
2225	2230	2235
Ser Ser Arg Ile Tyr Gly Phe	Thr Ala Val Asp Leu Lys Pro Ser Gly	
2245	2250	2255
Glu Asp Glu Met Ile Thr Met	Asp Asn Ala Glu Glu Tyr Val Asp Leu	
2260	2265	2270
Met Phe Asp Phe Cys Met His	Thr Gly Ile Gln Lys Gln Met Glu Ala	
2275	2280	2285
Phe Arg Asp Gly Phe Asn Lys	Val Phe Pro Met Glu Lys Leu Ser Ser	
2290	2295	2300
Phe Ser His Glu Glu Val Gln	Met Ile Leu Cys Gly Asn Gln Ser Pro	
2305	2310	2315
Ser Trp Ala Ala Glu Asp Ile	Ile Asn Tyr Thr Glu Pro Lys Leu Gly	
2325	2330	2335
Tyr Thr Arg Asp Ser Pro Gly	Phe Leu Arg Phe Val Arg Val Leu Cys	
2340	2345	2350
Gly Met Ser Ser Asp Glu Arg	Lys Ala Phe Leu Gln Phe Thr Thr Gly	
2355	2360	2365
Cys Ser Thr Leu Pro Pro Gly	Gly Leu Ala Asn Leu His Pro Arg Leu	
2370	2375	2380
Thr Val Val Arg Lys Val Asp	Ala Thr Asp Ala Ser Tyr Pro Ser Val	
2385	2390	2395
Asn Thr Cys Val His Tyr Leu	Lys Leu Pro Glu Tyr Ser Ser Glu Glu	
2405	2410	2415
Ile Met Arg Glu Arg Leu Leu	Ala Ala Thr Met Glu Lys Gly Phe His	
2420	2425	2430
Leu Asn		

&lt;210&gt; 4057

&lt;211&gt; 533



&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4057

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 agcaaggcct tcccagagga tgtggtcagg gtcattctt ccaacatctc ctccatctat  
 120  
 cagttccatt ctcaattctt cctcccagag ctgcagcggc gcctggacga ctggacagct  
 180  
 aacccccgca tcggtgacgt gatccagaag ctggccccct tctgaagat gtacagtga  
 240  
 tatgtcaaga actttgagcg agcggctgag ctgctggcca cctggaccga caagtctcca  
 300  
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 480  
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 533

&lt;210&gt; 4058

&lt;211&gt; 157

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4058

Ala	Arg	Leu	His	Leu	Leu	Asp	Gln	Val	Phe	Phe	Gln	Glu	Leu	Leu	Lys
1			5						10					15	
Thr	Ala	Arg	Ser	Ser	Lys	Ala	Phe	Pro	Glu	Asp	Val	Val	Arg	Val	Ile
			20					25					30		
Phe	Ser	Asn	Ile	Ser	Ser	Ile	Tyr	Gln	Phe	His	Ser	Gln	Phe	Phe	Leu
		35					40					45			
Pro	Glu	Leu	Gln	Arg	Arg	Leu	Asp	Asp	Trp	Thr	Ala	Asn	Pro	Arg	Ile
	50					55					60				
Gly	Asp	Val	Ile	Gln	Lys	Leu	Ala	Pro	Phe	Leu	Lys	Met	Tyr	Ser	Glu
65					70				75					80	
Tyr	Val	Lys	Asn	Phe	Glu	Arg	Ala	Ala	Glu	Leu	Leu	Ala	Thr	Trp	Thr
			85						90					95	
Asp	Lys	Ser	Pro	Leu	Phe	Gln	Glu	Val	Leu	Thr	Arg	Ile	Gln	Val	Arg
			100						105				110		
Leu	Gly	Glu	Gly	Trp	Ser	Gln	His	Cys	His	Ser	Gln	His	Ala	Val	Ala
		115					120					125			
Gln	Val	Ala	Leu	Ser	Asp	Ser	Gly	His	Leu	Pro	Gly	Ser	Ala	Ala	Ser
	130					135					140				
Ile	Gly	Pro	Cys	Leu	Leu	Val	Arg	Pro	Ser	Gly	Ala	Ala			
145					150					155					

&lt;210&gt; 4059

&lt;211&gt; 3994

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens



&lt;400&gt; 4059

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480  
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1080  
gctgagccca gggaagaacc ttgtgtgtgg gagcagcgcc accccgaaga gagagaaatc  
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2100  
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His Trp Pro Gly Ala Pro Glu Asp Gln Asp Asp Lys Asp Gly Gly Asp		510
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&lt;210&gt; 4068

&lt;211&gt; 521

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4068

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			20					25					30		
Arg	Lys	Ile	Pro	Cys	Asp	Val	Thr	Glu	Ala	Glu	Ile	Ile	Ser	Leu	Gly
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Leu	Pro	Phe	Gly	Lys	Val	Thr	Asn	Leu	Leu	Met	Leu	Lys	Gly	Lys	Ser
	50					55				60					
Gln	Ala	Phe	Leu	Glu	Met	Ala	Ser	Glu	Glu	Ala	Ala	Val	Thr	Met	Val
65					70					75				80	
Asn	Tyr	Tyr	Thr	Pro	Ile	Thr	Pro	His	Leu	Arg	Ser	Gln	Pro	Val	Tyr
			85					90					95		
Ile	Gln	Tyr	Ser	Asn	His	Arg	Glu	Leu	Lys	Thr	Asp	Asn	Leu	Pro	Asn
			100					105					110		
Gln	Ala	Arg	Ala	Gln	Ala	Ala	Leu	Gln	Ala	Val	Ser	Ala	Val	Gln	Ser
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Gly	Ser	Leu	Ala	Leu	Ser	Gly	Gly	Pro	Ser	Asn	Glu	Gly	Thr	Val	Leu
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Val	Leu	Lys	Ile	Ile	Thr	Phe	Thr	Lys	Asn	Asn	Gln	Phe	Gln	Ala	Leu
		180		185		190									
Leu	Gln	Tyr	Ala	Asp	Pro	Val	Asn	Ala	His	Tyr	Ala	Lys	Met	Ala	Leu
	195			200		205									
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	210			215		220									
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	225			230		235									
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		245		250		255									
Glu	Pro	Pro	Met	Ala	Ala	Ala	Phe	Gly	Ala	Pro	Gly	Ile	Ile	Ser	Ser
		260		265		270									
Pro	Tyr	Ala	Gly	Ala	Ala	Gly	Phe	Ala	Pro	Ala	Ile	Gly	Phe	Pro	Gln
	275			280		285									
Ala	Thr	Gly	Leu	Ser	Val	Pro	Ala	Val	Pro	Gly	Ala	Leu	Gly	Pro	Leu
	290			295		300									
Thr	Ile	Thr	Ser	Ser	Ala	Val	Thr	Gly	Arg	Met	Ala	Ile	Pro	Gly	Ala
	305			310		315									
Ser	Gly	Ile	Pro	Gly	Asn	Ser	Val	Leu	Leu	Val	Thr	Asn	Leu	Asn	Pro
		325		330		335									
Asp	Leu	Ile	Thr	Pro	His	Gly	Leu	Phe	Ile	Leu	Phe	Gly	Val	Tyr	Gly
		340		345		350									
Asp	Val	His	Arg	Val	Lys	Ile	Met	Phe	Asn	Lys	Lys	Glu	Asn	Ala	Leu
	355			360		365									
Val	Gln	Met	Ala	Asp	Ala	Asn	Gln	Ala	Gln	Leu	Ala	Met	Asn	His	Leu
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Ser	Gly	Gln	Arg	Leu	Tyr	Gly	Lys	Val	Leu	Arg	Ala	Thr	Leu	Ser	Lys
	385			390		395									
His	Gln	Ala	Val	Gln	Leu	Pro	Arg	Glu	Gly	Gln	Glu	Asp	Gln	Gly	Leu
		405		410		415									
Thr	Lys	Asp	Phe	Ser	Asn	Ser	Pro	Leu	His	Arg	Phe	Lys	Lys	Pro	Gly
		420		425		430									
Ser	Lys	Asn	Phe	Gln	Asn	Ile	Phe	Pro	Pro	Ser	Ala	Thr	Leu	His	Leu
	435			440		445									
Ser	Asn	Ile	Pro	Pro	Ser	Val	Thr	Val	Asp	Asp	Leu	Lys	Asn	Leu	Phe
	450			455		460									
Ile	Glu	Ala	Gly	Cys	Ser	Val	Lys	Ala	Phe	Lys	Phe	Phe	Gln	Lys	Asp
	465			470		475									
Arg	Lys	Met	Ala	Leu	Ile	Gln	Leu	Gly	Ser	Val	Glu	Glu	Ala	Ile	Gln
		485		490		495									
Ala	Leu	Ile	Glu	Leu	His	Asn	His	Asp	Leu	Gly	Glu	Asn	His	His	Leu
		500		505		510									
Arg	Val	Ser	Phe	Ser	Lys	Ser	Thr	Ile							
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&lt;210&gt; 4069

&lt;211&gt; 714

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4069



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&lt;210&gt; 4070

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4070

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Phe	Gln	His	Thr	Gln	His	Leu	Ala	Ile	Ser	Lys	His	Asn	Leu	Met	Phe
			20					25					30		
Leu	Tyr	Thr	Ile	Phe	Ile	Val	Ala	Thr	Lys	Ile	Thr	Met	Met	Thr	Thr
		35					40					45			
Gln	Thr	Ser	Thr	Met	Thr	Phe	Ala	Pro	Phe	Glu	Asp	Thr	Leu	Ser	Trp
	50					55					60				
Met	Leu	Phe	Gly	Trp	Gln	Gln	Pro	Phe	Ser	Ser	Cys	Glu	Lys	Lys	Ser
65					70				75					80	
Glu	Ala	Lys	Ser	Pro	Ser	Asn	Gly	Val	Gly	Ser	Leu	Ala	Ser	Lys	Pro
				85				90					95		
Val	Asp	Val	Ala	Ser	Asp	Asn	Val	Lys	Lys	Lys	His	Thr	Lys	Lys	Asn
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Glu															

&lt;210&gt; 4071

&lt;211&gt; 601

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4071

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<210> 4072

<211> 175

<212> PRT

<213> Homo sapiens

<400> 4072

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Cys	Ala	Leu	Val	Pro	Arg	Leu	Val	Arg	Met	Lys	Val	Phe	His	Leu	Ser	20	25	30	
Leu	Ser	Gln	Ser	Val	Val	Leu	Arg	His	His	Trp	Ile	Leu	Pro	Phe	Val	35	40	45	
Gln	Ala	Leu	Lys	Ala	Arg	Met	Thr	Ser	Phe	His	Arg	Phe	Phe	Phe	Thr	50	55	60	
Ala	Asn	Gln	Val	Lys	Ile	Tyr	Thr	Asn	Gln	Glu	Lys	Thr	Arg	Thr	Phe	65	70	75	80
Ile	Gly	Leu	Glu	Val	Thr	Ser	Gly	His	Ala	Gln	Phe	Leu	Asp	Leu	Val	85	90	95	
Ser	Glu	Val	Asp	Arg	Val	Met	Glu	Glu	Phe	Asn	Leu	Thr	Thr	Phe	Tyr	100	105	110	
Gln	Asp	Pro	Ser	Phe	His	Leu	Ser	Leu	Ala	Trp	Cys	Val	Gly	Asp	Ala	115	120	125	
Arg	Leu	Gln	Leu	Glu	Gly	Gln	Cys	Leu	Gln	Glu	Leu	Gln	Ala	Ile	Val	130	135	140	
Asp	Gly	Phe	Glu	Asp	Ala	Glu	Val	Leu	Leu	Arg	Val	His	Thr	Glu	Gln	145	150	155	160
Val	Arg	Cys	Lys	Ser	Gly	Asn	Lys	Phe	Phe	Ser	Met	Pro	Leu	Lys		165	170	175	

<210> 4073

<211> 1864

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4073

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 attg  
 1864

<210> 4074

<211> 456

<212> PRT

<213> Homo sapiens

<400> 4074

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			20					25					30		
Asn	Pro	Val	Asp	Ala	Ile	Tyr	Gln	Pro	Ser	Pro	Leu	Glu	Pro	Val	Ile
		35					40					45			
Ser	Thr	Met	Pro	Ser	Gln	Thr	Val	Leu	Pro	Pro	Glu	Pro	Val	Gln	Leu
	50					55					60				
Cys	Lys	Ser	Glu	Gln	Arg	Pro	Ser	Ser	Leu	Pro	Val	Gly	Pro	Val	Leu
65					70					75					80
Ala	Thr	Leu	Gly	His	His	Gln	Thr	Pro	Thr	Pro	Asn	Ser	Thr	Gly	Ser
				85					90					95	
Gly	His	Ser	Pro	Pro	Ser	Ser	Ser	Leu	Thr	Ser	Pro	Ser	His	Val	Asn
			100					105					110		
Leu	Ser	Pro	Asn	Thr	Val	Pro	Glu	Phe	Ser	Tyr	Ser	Ser	Ser	Glu	Asp
		115					120					125			
Glu	Phe	Tyr	Asp	Ala	Asp	Glu	Phe	His	Gln	Ser	Gly	Ser	Ser	Pro	Lys
	130					135					140				
Arg	Leu	Ile	Asp	Ser	Ser	Gly	Ser	Ala	Ser	Val	Leu	Thr	His	Ser	Ser
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Ser	Gly	Asn	Ser	Leu	Lys	Arg	Pro	Asp	Thr	Thr	Glu	Ser	Leu	Asn	Ser
				165					170					175	
Ser	Leu	Ser	Asn	Gly	Thr	Ser	Asp	Ala	Asp	Leu	Phe	Asp	Ser	His	Asp
			180					185					190		
Asp	Arg	Asp	Asp	Asp	Ala	Glu	Ala	Gly	Ser	Val	Glu	Glu	His	Lys	Ser
	195						200					205			
Val	Ile	Met	His	Leu	Leu	Ser	Gln	Val	Arg	Leu	Gly	Met	Asp	Leu	Thr
	210					215					220				
Lys	Val	Val	Leu	Pro	Thr	Phe	Ile	Leu	Glu	Arg	Arg	Ser	Leu	Leu	Glu
225					230					235					240
Met	Tyr	Ala	Asp	Phe	Phe	Ala	His	Pro	Asp	Leu	Phe	Val	Ser	Ile	Ser
				245					250					255	
Asp	Gln	Lys	Asp	Pro	Lys	Asp	Arg	Met	Val	Gln	Val	Val	Lys	Trp	Tyr

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 Trp Val Ser Lys Asn Ser Val Thr Phe Val Ala Glu Gln Val Ser His  
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 His Pro Pro Ile Ser Ala Phe Tyr Ala Glu Cys Phe Asn Lys Lys Ile  
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 Ile Gly Val His Asn Ile Gly Gln Gly Cys Val Ser Cys Leu Asp Tyr  
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 Asp Glu His Tyr Ile Leu Thr Phe Pro Asn Gly Tyr Gly Arg Ser Ile  
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 Ser Lys Thr Gly Tyr Ser Ala Asn Ile Ile Phe His Thr Lys Pro Phe  
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 Asp Lys Lys Ser Phe Cys Ser Ile  
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&lt;210&gt; 4075

&lt;211&gt; 2492

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4075

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<211> 410

<212> PRT

<213> Homo sapiens

<400> 4076

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&lt;211&gt; 684

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4077

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&lt;210&gt; 4078

&lt;211&gt; 194

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4078

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<212> DNA
<213> Homo sapiens
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 Tyr Thr Gly Tyr Asp Met Glu Asp Ala Met Ile Val Asn Lys Ala Ser  
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 Trp Glu Arg Gly Phe Ala His Gly Ser Val Tyr Lys Ser Glu Phe Ile  
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&lt;210&gt; 4084

&lt;211&gt; 362

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4084

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Pro	Ser	Ser	Gln	Arg	Gln	Val	Gln	Asn	Gly	Pro	Ser	Pro	Asp	Glu	Met
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&lt;210&gt; 4586

&lt;211&gt; 530

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4586

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Lys Asp Val His Lys Gly Val Gly Gly Ile Ile Phe Ser Ser Ser Pro
      35          40          45
Ile Leu Asp Leu Ser Glu Ser Gly Leu Cys Arg Leu Glu Glu Val Phe
      50          55          60
Arg Ile Pro Ser Leu Gln Gln Leu His Leu Gln Arg Asn Ala Leu Cys
65          70          75          80
Val Ile Pro Gln Asp Phe Phe Gln Leu Leu Pro Asn Leu Thr Trp Leu
      85          90          95
Asp Leu Arg Tyr Asn Arg Ile Lys Ala Leu Pro Ser Gly Ile Gly Ala
      100          105          110
His Gln His Leu Lys Thr Leu Leu Leu Glu Arg Asn Pro Ile Lys Met
      115          120          125
Leu Pro Val Glu Leu Gly Ser Val Thr Thr Leu Lys Ala Leu Asn Leu
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Arg His Cys Pro Leu Glu Phe Pro Pro Gln Leu Val Val Gln Lys Gly
145          150          155          160
Leu Val Ala Ile Gln Arg Phe Leu Arg Met Trp Ala Val Glu His Ser
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Leu Pro Arg Asn Pro Thr Ser Gln Glu Ala Pro Pro Val Arg Glu Met
      180          185          190
Thr Leu Arg Asp Leu Pro Ser Pro Gly Leu Glu Leu Ser Gly Asp His
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Met Lys Glu Lys Ala Ser Phe Leu Pro Pro Val Glu Lys Pro Asp Leu
225          230          235          240
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Glu Glu Ile Arg Arg Phe Trp Lys Leu Arg Gln Glu Ile Val Glu His
      260          265          270
Val Lys Ala Asp Val Leu Gly Asp Gln Leu Leu Thr Arg Glu Leu Pro
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Pro Asn Leu Lys Ala Ala Leu Asn Ile Glu Lys Glu Leu Pro Lys Pro
      290          295          300
Arg His Val Phe Arg Arg Lys Thr Ala Ser Ser Arg Ser Ile Leu Pro
305          310          315          320
Asp Leu Leu Ser Pro Tyr Gln Met Ala Ile Arg Ala Lys Arg Leu Glu
      325          330          335
Glu Ser Arg Ala Ala Ala Leu Arg Glu Leu Gln Glu Lys Gln Ala Leu
      340          345          350
Met Glu Gln Gln Arg Arg Glu Lys Arg Ala Leu Gln Glu Trp Arg Glu
      355          360          365
Arg Ala Gln Arg Met Arg Lys Arg Lys Glu Glu Leu Ser Lys Leu Leu
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Pro Pro Arg Arg Ser Met Val Ala Ser Lys Ile Pro Ser Ala Thr Asp

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 1723

&lt;210&gt; 4588

&lt;211&gt; 328

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4588

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Pro	Ser	Lys	Lys	Gly	Glu	Thr	Pro	Thr	Val	Asp	Gly	Thr	Trp	Lys	Thr
		35					40					45			
Pro	Ser	Phe	Pro	Lys	Lys	Lys	Thr	Ala	Ala	Ser	Ser	Asn	Gly	Ser	Gly
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Gln	Pro	Leu	Asp	Lys	Lys	Ala	Ala	Val	Ser	Trp	Leu	Thr	Pro	Ala	Pro
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Ser	Lys	Lys	Ala	Asp	Ser	Val	Ala	Ala	Lys	Val	Asp	Leu	Leu	Gly	Glu
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	165	170
Ser Ile Val Asn Tyr Asn Gly Asp Val Leu Tyr Asp Glu Tyr Ile Leu		175
	180	185
Pro Pro Cys His Ile Val Asp Tyr Arg Thr Arg Trp Ser Gly Ile Arg		190
	195	200
Lys Gln His Met Val Asn Ala Thr Pro Phe Lys Ile Ala Arg Gly Gln		205
	210	215
Ile Leu Lys Ile Leu Thr Gly Lys Ile Val Val Gly His Ala Ile His		220
225	230	235
Asn Asp Phe Lys Ala Leu Gln Tyr Phe His Pro Lys Ser Leu Thr Arg		240
	245	250
Asp Thr Ser His Ile Pro Pro Leu Asn Arg Lys Ala Asp Cys Pro Glu		255
	260	265
Asn Ala Thr Met Ser Leu Lys His Leu Thr Lys Lys Leu Leu Asn Arg		270
	275	280
Asp Ile Gln Val Gly Lys Ser Gly His Ser Ser Val Glu Asp Ala Gln		285
	290	295
Ala Thr Met Glu Leu Tyr Lys Leu Val Glu Val Glu Trp Glu Glu His		300
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Leu Ala Arg Asn Pro Pro Thr Asp		320
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&lt;210&gt; 4589

&lt;211&gt; 585

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4589

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&lt;210&gt; 4590



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 His Thr Leu Ser Pro Leu Ser Phe Arg Cys Ser Gln Arg Glu Pro Gln  
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 65 70 75 80  
 Cys Cys Ser Pro Thr Arg Arg Ala Cys Val Val Ser Arg Ala Val Thr  
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Lys Ala Ser Ser Ile Tyr Ser Thr Ala Leu Cys Phe Gly Leu Lys Arg			
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Ala Pro Leu Trp Pro Ser Gly His Asp Arg Leu His Glu Thr Arg Lys			
	50	55	60
Leu Arg Cys Leu Ala Asp Arg Leu Val Ser Pro His Pro Ala Ser Ser			
65	70	75	80
Pro Gly Ser Arg Tyr Leu Pro Gln Asn Ser Leu His Lys Trp Pro Gln			
	85	90	95
Ala Cys Ala Gly Leu Trp Gly Phe Leu Pro Trp Ala Val Val Leu Gly			
	100	105	110
Met Cys Ser Pro Gln Ala Asp Gly Gln Leu Trp Glu Gly Trp Ser Cys			
	115	120	125
Arg Leu Gly Ile His Thr Pro Ala His Val Ala Ser Pro Ser Ala Val			
	130	135	140
Trp Ser Gln Gly Trp Ala Gly Lys			
145	150		

&lt;210&gt; 4593

&lt;211&gt; 4783

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4593

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3900  
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3960  
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4020  
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4080

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 4320  
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 4500  
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 4560  
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 4620  
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<210> 4594

<211> 1145

<212> PRT

<213> Homo sapiens

<400> 4594

Asn	His	Glu	Asn	Leu	Phe	Leu	Gln	Pro	Pro	Lys	Leu	Ser	Arg	Glu	Glu
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Pro	Ser	Asn	Pro	Phe	Leu	Ala	Phe	Val	Glu	Lys	Val	Glu	His	Ser	Pro
		20						25					30		
Phe	Ser	Ser	Phe	Ala	Ser	Gln	Ala	Ser	Gly	Ser	Ser	Ser	Ser	Ala	Thr
		35					40						45		
Thr	Val	Thr	Ser	Lys	Val	Ala	Pro	Ser	Trp	Pro	Glu	Ser	His	Ser	Ser
	50					55					60				
Ala	Asp	Ser	Ala	Ser	Leu	Ala	Lys	Lys	Lys	Pro	Leu	Phe	Ile	Thr	Thr
65					70					75				80	
Asp	Ser	Ser	Lys	Leu	Val	Ser	Gly	Val	Leu	Gly	Ser	Ala	Leu	Thr	Ser
			85						90					95	
Gly	Gly	Pro	Ser	Leu	Ser	Ala	Met	Gly	Asn	Gly	Arg	Ser	Ser	Ser	Pro
		100						105					110		
Thr	Ser	Ser	Leu	Thr	Gln	Pro	Ile	Glu	Met	Pro	Thr	Leu	Ser	Ser	Ser
		115				120						125			
Pro	Thr	Glu	Glu	Arg	Pro	Thr	Val	Gly	Pro	Gly	Gln	Gln	Asp	Asn	Pro
		130				135					140				
Leu	Leu	Lys	Thr	Phe	Ser	Asn	Val	Phe	Gly	Arg	His	Ser	Gly	Gly	Phe
145					150					155				160	
Leu	Ser	Ser	Pro	Ala	Asp	Phe	Ser	Gln	Glu	Asn	Lys	Ala	Pro	Phe	Glu
			165					170						175	
Ala	Val	Lys	Arg	Phe	Ser	Leu	Asp	Glu	Arg	Ser	Leu	Ala	Cys	Arg	Gln

3794

610		615		620
Gly Ser Leu Arg Ser Val Leu Asn Lys Glu Ser His Ser Pro Phe Gly				
625		630		635
Leu Asp Ser Phe Asn Ser Thr Ala Lys Val Ser Pro Leu Thr Pro Lys				640
	645		650	655
Leu Phe Asn Ser Leu Leu Leu Gly Pro Thr Ala Ser Asn Asn Lys Thr				
	660		665	670
Glu Gly Ser Ser Leu Arg Asp Leu Leu His Ser Gly Pro Gly Lys Leu				
	675		680	685
Pro Gln Thr Pro Leu Asp Thr Gly Ile Pro Phe Pro Pro Val Phe Ser				
	690		695	700
Thr Ser Ser Ala Gly Val Lys Ser Lys Ala Ser Leu Pro Asn Phe Leu				
705		710		715
Asp His Ile Ile Ala Ser Val Val Glu Asn Lys Lys Thr Ser Asp Ala				720
	725		730	735
Ser Lys Arg Ala Cys Asn Leu Thr Asp Thr Gln Lys Glu Val Lys Glu				
	740		745	750
Met Val Met Gly Leu Asn Val Leu Asp Pro His Thr Ser His Ser Trp				
	755		760	765
Leu Cys Asp Gly Arg Leu Leu Cys Leu His Asp Pro Ser Asn Lys Asn				
	770		775	780
Asn Trp Lys Ile Phe Arg Glu Cys Trp Lys Gln Gly Gln Pro Val Leu				
785		790		795
Val Ser Gly Val His Lys Lys Leu Lys Ser Glu Leu Trp Lys Pro Glu				
	805		810	815
Ala Phe Ser Gln Glu Phe Gly Asp Gln Asp Val Asp Leu Val Asn Cys				
	820		825	830
Arg Asn Cys Ala Ile Ile Ser Asp Val Lys Val Arg Asp Phe Trp Asp				
	835		840	845
Gly Phe Glu Ile Ile Cys Lys Arg Leu Arg Ser Glu Asp Gly Gln Pro				
	850		855	860
Met Val Leu Lys Leu Lys Asp Trp Pro Pro Gly Glu Asp Phe Arg Asp				
865		870		875
Met Met Pro Thr Arg Phe Glu Asp Leu Met Glu Asn Leu Pro Leu Pro				
	885		890	895
Glu Tyr Thr Lys Arg Asp Gly Arg Leu Asn Leu Ala Ser Arg Leu Pro				
	900		905	910
Ser Tyr Phe Val Arg Pro Asp Leu Gly Pro Lys Met Tyr Asn Ala Tyr				
	915		920	925
Gly Leu Ile Thr Ala Glu Asp Arg Arg Val Gly Thr Thr Asn Leu His				
	930		935	940
Leu Asp Val Ser Asp Ala Val Asn Val Met Val Tyr Val Gly Ile Pro				
945		950		955
Ile Gly Glu Gly Ala His Asp Glu Glu Val Leu Lys Thr Ile Asp Glu				
	965		970	975
Gly Asp Ala Asp Glu Val Thr Lys Gln Arg Ile His Asp Gly Lys Glu				
	980		985	990
Lys Pro Gly Ala Leu Trp His Ile Tyr Ala Ala Lys Asp Ala Glu Lys				
	995		1000	1005
Ile Arg Glu Leu Leu Arg Lys Val Gly Glu Glu Gln Gly Gln Glu Asn				
	1010		1015	1020
Pro Pro Asp His Asp Pro Ile His Asp Gln Ser Trp Tyr Leu Asp Gln				
1025		1030		1035
Thr Leu Arg Lys Arg Leu Tyr Glu Glu Tyr Gly Val Gln Gly Trp Ala				1040



	1045	1050	1055
Ile Val Gln Phe Leu Gly Asp Ala Val Phe Ile Pro Ala Gly Ala Pro			
	1060	1065	1070
His Gln Val His Asn Leu Tyr Ser Cys Ile Lys Val Ala Glu Asp Phe			
	1075	1080	1085
Val Ser Pro Glu His Val Lys His Cys Phe Arg Leu Thr Gln Glu Phe			
	1090	1095	1100
Arg His Leu Ser Asn Thr His Thr Asn His Glu Asp Lys Leu Gln Val			
	1105	1110	1115
Lys Asn Ile Ile Tyr His Ala Val Lys Asp Ala Val Gly Thr Leu Lys			
	1125	1130	1135
Ala His Glu Ser Lys Leu Ala Arg Ser			
	1140	1145	

&lt;210&gt; 4595

&lt;211&gt; 935

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4595

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120
actcatttgc cccgcaggta gatcttgggg gtctgccagc cttcgggggc ttccttttagc
180
cccgccttca gccagatgcg cctcaggtct ttctcgaact tgatctgctt gcgtctcagg
240
cgtccctcct ggaccttcct ccgcaggaac cgcgtcttct tcaccagctt ccggtacttg
300
tggtggttca tcttccgccc gcggatcttc agcacgtttt tgcactgaat ttgaggcgca
360
tccgcgacgc cttcatcccc ctgctcggcc ccttccccta tctggctggg cggacactgg
420
taggattgcg gtggagccac agtccctgcg gtcccggat ccagtctggg caggaagcag
480
cgggccgtga gccagctctc cagggggctg acggacatct tcctggggac cagcatctcc
540
tccagctcca gctgggcccc cttgcgaggg agagaggccg ccctacctgg gccggccggc
600
gatngtgctg taaagggggc cgcagaccgc gctgcccagc actccagaga cggccaaggc
660
gggtggccgc ctgcccagg aacggcctca acagctggga agtcaggcgc cccaggagca
720
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780
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935

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&lt;210&gt; 4596



<211> 169  
 <212> PRT  
 <213> Homo sapiens

<400> 4596  
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 20 25 30  
 Phe Leu Gly Thr Ser Ile Ser Ser Ser Ser Trp Ala Pro Leu Arg  
 35 40 45  
 Gly Arg Glu Ala Ala Leu Pro Gly Pro Ala Gly Asp Xaa Ala Val Lys  
 50 55 60  
 Gly Pro Ala Asp Pro Ala Ala Gln His Ser Arg Asp Gly Gln Gly Gly  
 65 70 75 80  
 Trp Pro Pro Ala Gln Gly Thr Ala Ser Thr Ala Gly Lys Ser Gly Ala  
 85 90 95  
 Pro Gly Ala Trp Ser Val Gly Gly Ala Thr Gly Pro Arg Gly Ala Lys  
 100 105 110  
 Gly Pro Arg Thr Gly Arg Pro Ala Pro Ser Pro Gly Ser Pro Pro Arg  
 115 120 125  
 Glu Ser Arg Cys Leu Ala Pro Gly Pro Ser Arg Leu Asp Pro Gly Pro  
 130 135 140  
 Ala Xaa Ala Ala Ala Pro Gly Ala Leu Arg Pro Pro Ala Asp Pro Ser  
 145 150 155 160  
 Gln Ala Arg Pro Arg Arg Gly Ser Asn  
 165

<210> 4597  
 <211> 515  
 <212> DNA  
 <213> Homo sapiens

<400> 4597  
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 120  
 gggacactca tgctcagtga ctgatgggat ggggggtaca aagtcccagc cacgtgattc  
 180  
 tgggaggcca ttccagctca caactcctgg gccctgggga gtcggccgtg ggacctgcct  
 240  
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 360  
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 420  
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<210> 4598

&lt;211&gt; 135

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4598

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Met Ser Ser Trp Gly His Ser Cys Ser Val Thr Asp Gly Met Gly Gly
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Thr Lys Ser Gln Pro Arg Asp Ser Gly Arg Pro Phe Gln Leu Thr Thr
          20           25           30
Pro Gly Pro Trp Gly Val Gly Arg Gly Thr Cys Leu Thr Ala Gln Leu
          35           40           45
Leu Leu Ser Ala Pro Phe Cys Leu Leu Pro Ala Leu Ser Gln Ala Val
          50           55           60
Ser Pro Arg Asn Ser Leu Arg Asn Ile Leu Thr Leu Asn Ser Thr Ala
65           70           75           80
Glu Pro Ser Ser Trp Glu Ser Arg Glu Arg Pro Leu Gln Ser Arg Asn
          85           90           95
Val Tyr Ser Ser Ala Ser Phe Ser Glu His Leu Asp Gly Gly Cys Ser
          100          105          110
Pro Leu Val Leu Gln Ser Leu Ala Arg Arg Ile Ser Ser Thr Trp Leu
          115          120          125
Val Asp Gln Ser Leu Arg Glu
          130          135

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&lt;210&gt; 4599

&lt;211&gt; 2314

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4599

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120
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180
acgaaagatg agtggatgga aaagctcaat aacttgcatt tccagagagc agacatgaac
240
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300
atggaatctg gaatcgaacc tagtgtggat ctggaaacac ttgatgaacg aatcaagatc
360
cgggagatga tactgaaagg tcagattcag gaggccatcg ccttgatcaa cagcctccac
420
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480
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540
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600
gcctttgaca gtcccagga gtcgcccttc ggagacctcc tccacacat gcagaggcag
660
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720

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 2160  
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 2520  
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 2580  
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 2673

<210> 4086

<211> 789

<212> PRT

<213> Homo sapiens

<400> 4086

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Val	Lys	Arg	Val	Thr	Ala	Asn	Asn	Leu	Glu	Thr	Phe	Ile	Phe	Ile	Leu
			20					25					30		
Phe	Leu	Leu	Val	Phe	Ala	Ile	Ala	Ala	Ala	Ala	Tyr	Val	Trp	Ile	Glu
			35				40					45			
Gly	Thr	Lys	Asp	Pro	Ser	Arg	Asn	Arg	Tyr	Lys	Leu	Phe	Leu	Glu	Cys
			50			55					60				
Thr	Leu	Ile	Leu	Thr	Ser	Val	Val	Pro	Pro	Glu	Leu	Pro	Ile	Glu	Leu
65					70					75				80	
Ser	Leu	Ala	Val	Asn	Thr	Ser	Leu	Ile	Ala	Leu	Ala	Lys	Leu	Tyr	Met
				85					90					95	
Tyr	Cys	Thr	Glu	Pro	Phe	Arg	Ile	Pro	Phe	Ala	Gly	Lys	Val	Glu	Val
			100					105					110		
Cys	Cys	Phe	Asp	Lys	Thr	Gly	Thr	Leu	Thr	Ser	Asp	Ser	Leu	Val	Val
		115				120					125				
Arg	Gly	Val	Ala	Gly	Leu	Arg	Asp	Gly	Lys	Glu	Val	Thr	Pro	Val	Ser
		130				135					140				
Ser	Ile	Pro	Val	Glu	Thr	His	Arg	Ala	Leu	Ala	Ser	Cys	His	Ser	Leu
145					150					155					160
Met	Gln	Leu	Asp	Asp	Gly	Thr	Leu	Val	Gly	Asp	Pro	Leu	Glu	Lys	Ala
			165						170					175	
Met	Leu	Thr	Ala	Val	Asp	Trp	Thr	Leu	Thr	Lys	Asp	Glu	Lys	Val	Phe
			180					185						190	
Pro	Arg	Ser	Ile	Lys	Thr	Gln	Gly	Leu	Lys	Ile	His	Gln	Arg	Phe	His

195	200	205
Phe Ala Ser Ala Leu Lys Arg Met Ser Val Leu Ala Ser Tyr Glu Lys		
210	215	220
Leu Gly Ser Thr Asp Leu Cys Tyr Ile Ala Ala Val Lys Gly Ala Pro		
225	230	235
Glu Thr Leu His Ser Met Phe Ser Gln Cys Pro Pro Asp Tyr His His		
245	250	255
Ile His Thr Glu Ile Ser Arg Glu Gly Ala Arg Val Leu Ala Leu Gly		
260	265	270
Tyr Lys Glu Leu Gly His Leu Thr His Gln Gln Ala Arg Glu Val Lys		
275	280	285
Arg Glu Ala Leu Glu Cys Ser Leu Lys Phe Val Gly Phe Ile Val Val		
290	295	300
Ser Cys Pro Leu Lys Ala Asp Ser Lys Ala Val Ile Arg Glu Ile Gln		
305	310	315
Asn Ala Ser His Arg Val Val Met Ile Thr Gly Asp Asn Pro Leu Thr		
325	330	335
Ala Cys His Val Ala Gln Glu Leu His Phe Ile Glu Lys Ala His Thr		
340	345	350
Leu Ile Leu Gln Pro Pro Ser Glu Lys Gly Arg Gln Cys Glu Trp Arg		
355	360	365
Ser Ile Asp Gly Ser Ile Val Leu Pro Leu Xaa Pro Gly Ala Pro Gln		
370	375	380
Arg His Trp Pro Trp Ser Thr His Xaa Cys Leu Thr Gly Asp Gly Leu		
385	390	395
Ala His Leu Gln Ala Thr Asp Pro Gln Gln Leu Leu Arg Leu Ile Pro		
405	410	415
His Val Gln Val Phe Ala Arg Val Ala Pro Lys Gln Lys Glu Phe Val		
420	425	430
Ile Thr Ser Leu Lys Glu Leu Gly Tyr Val Thr Leu Met Cys Gly Asp		
435	440	445
Gly Thr Asn Asp Val Gly Ala Leu Lys His Ala Asp Val Gly Val Ala		
450	455	460
Leu Leu Ala Asn Ala Pro Glu Arg Val Val Glu Arg Arg Arg Arg Pro		
465	470	475
Arg Asp Ser Pro Thr Leu Ser Asn Ser Gly Ile Arg Ala Thr Ser Arg		
485	490	495
Thr Ala Lys Gln Arg Ser Gly Leu Pro Pro Ser Glu Glu Gln Pro Thr		
500	505	510
Ser Gln Arg Asp Arg Leu Ser Gln Val Leu Arg Asp Leu Glu Asp Glu		
515	520	525
Ser Thr Pro Ile Val Lys Leu Gly Asp Ala Ser Ile Ala Ala Pro Phe		
530	535	540
Thr Ser Lys Leu Ser Ser Ile Gln Cys Ile Cys His Val Ile Lys Gln		
545	550	555
Gly Arg Cys Thr Leu Val Thr Thr Leu Gln Met Phe Lys Ile Leu Ala		
565	570	575
Leu Asn Ala Leu Ile Leu Ala Tyr Ser Gln Ser Val Leu Tyr Leu Glu		
580	585	590
Gly Val Lys Phe Ser Asp Phe Gln Ala Thr Leu Gln Gly Leu Leu Leu		
595	600	605
Ala Gly Cys Phe Leu Phe Ile Ser Arg Ser Lys Pro Leu Lys Thr Leu		
610	615	620
Ser Arg Glu Arg Pro Leu Pro Asn Ile Phe Asn Leu Tyr Thr Ile Leu		

625                                      630                                      635                                      640  
 Thr Val Met Leu Gln Phe Phe Val His Phe Leu Ser Leu Val Tyr Leu  
    645                                      650                                      655  
 Tyr Arg Glu Ala Gln Ala Arg Ser Pro Xaa Arg Xaa Gln Glu Gln Phe  
    660                                      665                                      670  
 Val Asp Leu Tyr Lys Glu Phe Glu Pro Ser Leu Val Asn Ser Thr Val  
    675                                      680                                      685  
 Tyr Ile Met Ala Met Ala Met Gln Met Ala Thr Phe Ala Ile Asn Tyr  
    690                                      695                                      700  
 Lys Gly Pro Pro Phe Met Glu Ser Leu Pro Glu Asn Lys Pro Leu Val  
 705                                      710                                      715                                      720  
 Trp Ser Leu Ala Val Ser Leu Leu Ala Ile Ile Gly Leu Leu Leu Gly  
    725                                      730                                      735  
 Ser Ser Pro Asp Phe Asn Ser Gln Phe Gly Leu Val Asp Ile Pro Val  
    740                                      745                                      750  
 Glu Phe Lys Leu Val Ile Ala Gln Val Leu Leu Leu Asp Phe Cys Leu  
    755                                      760                                      765  
 Ala Leu Leu Ala Asp Arg Val Leu Gln Phe Phe Leu Gly Thr Pro Lys  
    770                                      775                                      780  
 Leu Lys Val Pro Ser  
 785

&lt;210&gt; 4087

&lt;211&gt; 959

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4087

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 120  
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 180  
 aatcgagggc atggtggggg atttttgaca tcttgccaag cagaactaca ggagctcatg  
 240  
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 300  
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 360  
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 780

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<210> 4088

<211> 319

<212> PRT

<213> Homo sapiens

<400> 4088

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Gln	Trp	Ala	Glu	Gln	Thr	Arg	Arg	Leu	Gln	Arg	Leu	Asp	Val	Ser	Leu
		20						25					30		
Ala	Val	Ala	Arg	Val	Arg	Ser	Ala	Gly	Pro	Ser	Cys	Gln	Asn	Lys	Gly
		35					40					45			
Asp	Leu	Val	Met	Glu	Ala	Leu	Leu	Glu	Gly	Ile	Gln	Asn	Arg	Gly	His
	50					55					60				
Gly	Gly	Gly	Phe	Leu	Thr	Ser	Cys	Glu	Ala	Glu	Leu	Gln	Glu	Leu	Met
65					70					75					80
Lys	Gln	Ile	Asp	Ile	Met	Val	Ala	His	Lys	Lys	Ser	Glu	Trp	Glu	Gly
			85						90					95	
Arg	Thr	His	Ala	Leu	Glu	Thr	Cys	Leu	Lys	Ile	Arg	Glu	Gln	Glu	Leu
			100					105					110		
Lys	Ser	Leu	Arg	Ser	Gln	Leu	Asp	Val	Thr	His	Lys	Glu	Val	Gly	Met
		115					120					125			
Leu	His	Gln	Gln	Val	Glu	Glu	His	Glu	Lys	Ile	Lys	Gln	Glu	Met	Thr
		130				135						140			
Met	Glu	Tyr	Lys	Gln	Glu	Leu	Lys	Lys	Leu	His	Glu	Glu	Leu	Cys	Ile
145					150					155					160
Leu	Lys	Arg	Ser	Tyr	Glu	Lys	Leu	Gln	Lys	Lys	Gln	Met	Arg	Glu	Phe
			165					170						175	
Arg	Gly	Asn	Thr	Lys	Asn	His	Arg	Glu	Asp	Arg	Ser	Glu	Ile	Glu	Arg
			180					185					190		
Leu	Thr	Ala	Lys	Ile	Glu	Glu	Phe	Arg	Gln	Lys	Ser	Leu	Asp	Trp	Glu
		195					200						205		
Lys	Gln	Arg	Leu	Ile	Tyr	Gln	Gln	Gln	Val	Ser	Ser	Leu	Glu	Ala	Gln
		210				215						220			
Arg	Lys	Ala	Leu	Ala	Glu	Gln	Ser	Glu	Ile	Ile	Gln	Ala	Gln	Leu	Val
225					230					235					240
Asn	Arg	Lys	Gln	Lys	Leu	Glu	Ser	Val	Glu	Leu	Ser	Ser	Gln	Ser	Glu
			245						250					255	
Ile	Gln	His	Leu	Ser	Ser	Lys	Leu	Glu	Arg	Ala	Asn	Asp	Thr	Ile	Cys
		260						265					270		
Ala	Asn	Glu	Leu	Glu	Ile	Glu	Arg	Leu	Thr	Met	Arg	Val	Asn	Asp	Leu
		275					280					285			
Val	Gly	Thr	Ser	Met	Thr	Val	Leu	Gln	Glu	Gln	Gln	Gln	Lys	Glu	Glu
		290				295						300			
Lys	Leu	Arg	Glu	Ser	Glu	Lys	Leu	Leu	Glu	Ala	Leu	Gln	Glu	Lys	
305					310					315					

<210> 4089  
<211> 511  
<212> DNA  
<213> Homo sapiens

<400> 4089  
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120  
aaccctgtgg ggctggcccc tacacagttt ttaaggggta caggggaagg aagaaacagg  
180  
caccatgtgg ggcagggggt ctgcttctat catatttcca ttttggtggt ttaggagatc  
240  
cttccaactc tcactaacat tattttccag agaacaaaag aaaaactatg ctctccaaga  
300  
acatgtttcc tttgtaattt ttctgtcctc aaactttttc tggagagatg agtcatttga  
360  
cctgacattg agaataggct tgaagccctt tgagaggaca aaggagatag agtcagcatt  
420  
cctatctcca tgctctgaag atccaagtca cttgggttact gctccctggg ctgtctattt  
480  
tcactgttta tggaagatag agtacacctg t  
511

<210> 4090  
<211> 109  
<212> PRT  
<213> Homo sapiens

<400> 4090  
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1 5 10 15  
Arg Arg Ser Phe Gln Leu Ser Leu Thr Leu Phe Ser Arg Glu Gln Lys  
20 25 30  
Lys Asn Tyr Ala Leu Gln Glu His Val Ser Phe Val Ile Phe Leu Ser  
35 40 45  
Ser Asn Phe Phe Trp Arg Asp Glu Ser Phe Asp Leu Thr Leu Arg Ile  
50 55 60  
Gly Leu Lys Pro Phe Glu Arg Thr Lys Glu Ile Glu Ser Ala Phe Leu  
65 70 75 80  
Ser Pro Cys Ser Glu Asp Pro Ser His Leu Val Thr Ala Pro Trp Ala  
85 90 95  
Val Tyr Phe His Cys Leu Trp Lys Ile Glu Tyr Thr Cys  
100 105

<210> 4091  
<211> 1526  
<212> DNA  
<213> Homo sapiens

<400> 4091  
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60



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120  
caaggaaggg cccccgggag ctctatatgg aggaaggagc ccagaatggg gtgcaccagg  
180  
aagacaaaaa ctttggtgtc cacttgctg atcctgagcg gcatgactaa catcatctgc  
240  
ctgctctacg tgggctgggt caccaactac atcgccagcg tgtatgtgcg ggggcaggag  
300  
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360  
ctggaccacc tggagaatgt catcaagcag cacattcaag gctataggag aaatttctcc  
420  
cttctgaatg tgtccaacta actctgttca cctgagaaat catattcccc agctctgggt  
480  
atccctgaat aaccacagga gaacagttcc aggccctgat aagtcagcta ttgcaagggg  
540  
gacctggctg gaagatatga aggaaaaata tcattcttga actaataagt tgagagatca  
600  
cagccttcag gggaccagaa gggaaggctg aacagagaag ggcaatttca cgttcgccat  
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720  
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840  
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900  
cttgtttcat gaacagctcc ctgtaggac tctgttgggg tgggggattc taggggcatc  
960  
tccgcagttt tcttctgaaa acaaaacgaa tacaagttgg gcaggtgcaa caactgtgca  
1020  
tgcagtcacc tcccagggt ggctagcagt attgttgggt accgtaagca cttagcattg  
1080  
ttaagtgagc ataagtaaca agatgcaaca gcctctggcc aagttttgaa gattttgttt  
1140  
taaagtatgc ttttagatgt tgacattcat gattattaaa aggaacaaaa ctcaatttgg  
1200  
ggtctcaaga gccacaattc tagacttcta ggatgtcagg agccatgctc ttaagcttct  
1260  
caccctgctg ttttaatgag attaattgatt attttccact gagcacctac ctgtgatgtt  
1320  
cataaaaaag tgaaataaat gactcacatg gagatttggg aggatattcac tgtggaaagt  
1380  
agatgttaac agcctctaga aatatgataa ttatcagcta tttgagatgc agtcactgta  
1440  
atgtgataac aagatgtgtt gtgcaggtag aaagcatgga gagaaatggc acaaagtaga  
1500  
gttataagaa aaaaaaaaaa aaaaaa  
1526

&lt;210&gt; 4092

&lt;211&gt; 146

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4092

His Gly Gly Tyr Thr Gly Ser Gly Pro Gly Phe Gly Glu Pro Arg Asp  
 1 5 10 15  
 Ser Gly Ala Glu Val Pro Ser Gly Ser Gly Arg Ala Thr Gly Cys Glu  
 20 25 30  
 Arg Gly Gly Val Arg Gly Ala Arg Gln Gly Arg Ala Pro Gly Ser Ser  
 35 40 45  
 Ile Trp Arg Lys Glu Pro Arg Met Val Cys Thr Arg Lys Thr Lys Thr  
 50 55 60  
 Leu Val Ser Thr Cys Val Ile Leu Ser Gly Met Thr Asn Ile Ile Cys  
 65 70 75 80  
 Leu Leu Tyr Val Gly Trp Val Thr Asn Tyr Ile Ala Ser Val Tyr Val  
 85 90 95  
 Arg Gly Gln Glu Pro Ala Pro Asp Lys Lys Leu Glu Glu Asp Lys Gly  
 100 105 110  
 Asp Thr Leu Lys Ile Ile Glu Arg Leu Asp His Leu Glu Asn Val Ile  
 115 120 125  
 Lys Gln His Ile Gln Gly Tyr Arg Arg Asn Phe Ser Leu Leu Asn Val  
 130 135 140  
 Ser Asn  
 145

&lt;210&gt; 4093

&lt;211&gt; 1519

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4093

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 ggcagggggc ggtgtgcagc ggaaccatgc acataggcgc ccacgccgac taccctccc  
 120  
 gaggaaga ggccggggcg cgctgggggg tgagagcatg agggaggccg gggggggctg  
 180  
 cttggagcgc tgctagggag cgggtgccgc gcacaccgc ctgggcgcgg cggagggcgg  
 240  
 ggagcgggca ggtcgcgcct cggcgcagcg accgccggga gctgttctga tttccgacgc  
 300  
 gcacctaggg gcccgagca gccccgccc cggcgcgccg ccgacatggg caacgcaggg  
 360  
 agcatggatt cgcagcagac cgatttcagg gcgcacaacg tgcctttgaa gctgccgatg  
 420  
 ccagagccag gtgaactgga ggagcgattt gccatcgtgc tgaacgctat gaacctacct  
 480  
 cctgacaaag ccaggttact gcggcagtat gataatgaga aaaaatggga actgatttgt  
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 tatctggatc cagctgtaac caggaagaaa ttcagacggc gtgttcaaga atctacacaa  
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 720

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 780  
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 840  
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 900  
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 1080  
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 1140  
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 1200  
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 1260  
 catttcagga atgaagacaa taacatagat tttatgggtg cttctatgca gtttattaat  
 1320  
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 1380  
 aaattaggcc tggacgaata cttggacaag ctgaaacaca ctgagagtga caagcttcaa  
 1440  
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 1500  
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 1519

&lt;210&gt; 4094

&lt;211&gt; 391

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4094

Met	Gly	Asn	Ala	Gly	Ser	Met	Asp	Ser	Gln	Gln	Thr	Asp	Phe	Arg	Ala	1	5	10	15
His	Asn	Val	Pro	Leu	Lys	Leu	Pro	Met	Pro	Glu	Pro	Gly	Glu	Leu	Glu	20	25	30	
Glu	Arg	Phe	Ala	Ile	Val	Leu	Asn	Ala	Met	Asn	Leu	Pro	Pro	Asp	Lys	35	40	45	
Ala	Arg	Leu	Leu	Arg	Gln	Tyr	Asp	Asn	Glu	Lys	Lys	Trp	Glu	Leu	Ile	50	55	60	
Cys	Asp	Gln	Glu	Arg	Phe	Gln	Val	Lys	Asn	Pro	Pro	His	Thr	Tyr	Ile	65	70	75	80
Gln	Lys	Leu	Lys	Gly	Tyr	Leu	Asp	Pro	Ala	Val	Thr	Arg	Lys	Lys	Phe	85	90	95	
Arg	Arg	Arg	Val	Gln	Glu	Ser	Thr	Gln	Val	Leu	Arg	Glu	Leu	Glu	Ile	100	105	110	
Ser	Leu	Arg	Thr	Asn	His	Ile	Gly	Trp	Val	Arg	Glu	Phe	Leu	Asn	Glu	115	120	125	
Glu	Asn	Lys	Gly	Leu	Asp	Val	Leu	Val	Glu	Tyr	Leu	Ser	Phe	Ala	Gln	130	135	140	
Tyr	Ala	Val	Thr	Phe	Asp	Phe	Glu	Ser	Val	Glu	Ser	Thr	Val	Glu	Ser				

145                                      150                                      155                                      160  
 Ser Val Asp Lys Ser Lys Pro Trp Ser Arg Ser Ile Glu Asp Leu His  
    165                                      170                                      175  
 Arg Gly Ser Asn Leu Pro Ser Pro Val Gly Asn Ser Val Ser Arg Ser  
    180                                      185                                      190  
 Gly Arg His Ser Ala Leu Arg Tyr Asn Thr Leu Pro Ser Arg Arg Thr  
    195                                      200                                      205  
 Leu Lys Asn Ser Arg Leu Val Ser Lys Lys Asp Asp Val His Val Cys  
    210                                      215                                      220  
 Ile Met Cys Leu Arg Ala Ile Met Asn Tyr Gln Tyr Gly Phe Asn Met  
 225                                      230                                      235                                      240  
 Val Met Ser His Pro His Ala Val Asn Glu Ile Ala Leu Ser Leu Asn  
    245                                      250                                      255  
 Asn Lys Asn Pro Arg Thr Lys Ala Leu Val Leu Glu Leu Leu Ala Ala  
    260                                      265                                      270  
 Val Cys Leu Val Arg Gly Gly His Glu Ile Ile Leu Ser Ala Phe Asp  
    275                                      280                                      285  
 Asn Phe Lys Glu Val Cys Gly Glu Lys Gln Arg Phe Glu Lys Leu Met  
    290                                      295                                      300  
 Glu His Phe Arg Asn Glu Asp Asn Asn Ile Asp Phe Met Val Ala Ser  
 305                                      310                                      315                                      320  
 Met Gln Phe Ile Asn Ile Val Val His Ser Val Glu Asp Met Asn Phe  
    325                                      330                                      335  
 Arg Val His Leu Gln Tyr Glu Phe Thr Lys Leu Gly Leu Asp Glu Tyr  
    340                                      345                                      350  
 Leu Asp Lys Leu Lys His Thr Glu Ser Asp Lys Leu Gln Val Gln Ile  
    355                                      360                                      365  
 Gln Ala Tyr Leu Asp Asn Val Phe Asp Val Gly Ala Leu Leu Glu Asp  
    370                                      375                                      380  
 Ala Glu Thr Lys Asn Ala Ala  
 385                                      390

&lt;210&gt; 4095

&lt;211&gt; 253

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4095

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 120  
 agagagatca agtagcatcc ccagcgaaat ctgaggcctc tggaggcgcc tgtgcacgtg  
 180  
 tgtctggaag tgtgtgtcca ggcagcatat ctgcatgtgt gtgcctgtcc agacagcata  
 240  
 tctgtgcacg cgt  
 253

&lt;210&gt; 4096

&lt;211&gt; 83

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4096

Met Gly Gly Gly Glu Gln Ala Ser Ala Gly Arg Val Pro Lys Arg Gln  
 1 5 10 15  
 Pro Arg Glu Gln Gly Gln Ile Val Gly Gly Gly Phe Ser Ser Thr Val  
 20 25 30  
 Gln Val Arg Lys Leu Arg Leu Lys Arg Asp Gln Val Ala Ser Pro Ala  
 35 40 45  
 Lys Ser Glu Ala Ser Gly Gly Ala Cys Ala Arg Val Ser Gly Ser Val  
 50 55 60  
 Cys Pro Gly Ser Ile Ser Ala Cys Val Cys Leu Ser Arg Gln His Ile  
 65 70 75 80  
 Cys Ala Arg

&lt;210&gt; 4097

&lt;211&gt; 1385

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4097

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 120  
 cgtgctgtcc tcaattgttc tacaatgagt gccaaatctg ctatcagcaa ggaaattttt  
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 240  
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 360  
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 780  
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 1020

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 1080  
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 1140  
 aacatgtatt tttttctctg atattaagca ggaaggcatt ttaatgtggt gacatcagat  
 1200  
 gttatttttc ctagatgaaa ataaaagtca agcagtgatt agtttcactc actgtcctag  
 1260  
 ctacacttaa tttgaagatt aaaattctac attgtggaaa acaattgaat ttattgggaa  
 1320  
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 1380  
 gttca  
 1385

<210> 4098

<211> 258

<212> PRT

<213> Homo sapiens

<400> 4098

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Glu	Pro	Arg	Ala	Leu	Gly	Arg	Val	Pro	Arg	Thr	Gly	Thr	Ala	Gly	Ala
			20					25					30		
Arg	Ala	Arg	Leu	His	Asp	Ser	Leu	Arg	Ala	Val	Leu	Thr	Cys	Ser	Thr
		35					40				45				
Met	Ser	Ala	Lys	Ser	Ala	Ile	Ser	Lys	Glu	Ile	Phe	Ala	Pro	Leu	Asp
	50					55					60				
Glu	Arg	Met	Leu	Gly	Ala	Val	Gln	Val	Lys	Arg	Arg	Thr	Lys	Lys	Lys
65				70					75					80	
Ile	Pro	Phe	Leu	Ala	Thr	Gly	Gly	Gln	Gly	Glu	Tyr	Leu	Thr	Tyr	Ile
			85					90						95	
Cys	Leu	Ser	Val	Thr	Asn	Lys	Lys	Pro	Thr	Gln	Ala	Ser	Ile	Thr	Lys
			100					105					110		
Val	Lys	Gln	Phe	Glu	Gly	Ser	Thr	Ser	Phe	Val	Arg	Arg	Ser	Gln	Trp
		115					120					125			
Met	Leu	Glu	Gln	Leu	Arg	Gln	Val	Asn	Gly	Ile	Asp	Pro	Asn	Gly	Asp
	130					135					140				
Ser	Ala	Glu	Phe	Asp	Leu	Leu	Phe	Glu	Asn	Ala	Phe	Asp	Gln	Trp	Val
145				150					155					160	
Ala	Ser	Thr	Ala	Ser	Glu	Lys	Cys	Thr	Phe	Phe	Gln	Ile	Leu	His	His
			165					170						175	
Thr	Cys	Gln	Arg	Tyr	Leu	Thr	Asp	Arg	Lys	Pro	Glu	Phe	Ile	Asn	Cys
		180					185						190		
Gln	Ser	Lys	Ile	Met	Gly	Gly	Asn	Ser	Ile	Leu	His	Ser	Ala	Ala	Asp
	195						200					205			
Ser	Val	Thr	Ser	Ala	Val	Gln	Lys	Ala	Ser	Gln	Ala	Leu	Asn	Glu	Arg
	210					215					220				
Gly	Glu	Arg	Leu	Gly	Arg	Ala	Glu	Glu	Lys	Thr	Glu	Asp	Leu	Lys	Asn
225				230					235					240	
Ser	Ala	Gln	Gln	Phe	Ala	Glu	Thr	Ala	His	Lys	Leu	Ala	Met	Lys	His
			245					250					255		

Lys Cys

<210> 4099  
 <211> 511  
 <212> DNA  
 <213> Homo sapiens

<400> 4099  
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 120  
 ttaaacaata aaaaattgta taatggaatt ggatcagggg gttcccaaaa ccccttcac  
 180  
 tgaggtttgg caattcactg agaaggactc acaggactca gcagatagtc atacttgggg  
 240  
 ctttgattta ttacatttaa tacagcaaaa agacacaaaag caacatttga gaaaggaaaa  
 300  
 ggtgcatgtg tcaaagtctg gaggaagcca ggcacaagct acaggagtca tctcctgtgt  
 360  
 agctagcagg atatgcttaa ttccccagc ctcaaatttt gacgacacat gtgcaatgtt  
 420  
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 480  
 acataggcaa cctctcctct ccctcacgcg t  
 511

<210> 4100  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 4100  
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 Gln Phe Thr Glu Lys Asp Ser Gln Asp Ser Ala Asp Ser His Thr Trp  
 20 25 30  
 Gly Phe Asp Leu Leu His Leu Ile Gln Gln Lys Asp Thr Lys Gln His  
 35 40 45  
 Leu Arg Lys Glu Lys Val His Val Ser Lys Ser Gly Gly Ser Gln Ala  
 50 55 60  
 Gln Ala Thr Gly Val Ile Ser Cys Val Ala Ser Arg Ile Cys Leu Ile  
 65 70 75 80  
 Pro Pro Ala Ser Asn Phe Asp Asp Thr Cys Ala Met Leu Ser Thr Leu  
 85 90 95  
 Pro Glu Phe His  
 100

<210> 4101  
 <211> 536  
 <212> DNA  
 <213> Homo sapiens

<400> 4101



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 aagttggact cgtattgctg tgtgggggtcc cagtgcacgc gtgtgcaccc gctacaagat  
 120  
 ccaggaaaga tggcacacgg cagacgacga caggaaggac acctgctccc cacccttccc  
 180  
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 360  
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 420  
 aataactaaa taaataaaca actaaataaa gacatgaagg aatggatgca gagacgtgaa  
 480  
 cggatggcgc aggacgtccc tgggtgggggc cacgggtccc ttaaggcatg tgggag  
 536

&lt;210&gt; 4102

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4102

Met	Cys	Leu	Leu	Ser	Trp	Thr	Arg	Ile	Ala	Val	Trp	Gly	Pro	Ser	Ala
1				5					10					15	
Arg	Val	Cys	Thr	Arg	Tyr	Lys	Ile	Gln	Glu	Arg	Trp	His	Thr	Ala	Asp
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Asp	Asp	Arg	Lys	Asp	Thr	Cys	Ser	Pro	Pro	Phe	Pro	Gly	Pro	Arg	His
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Val	Gln	Asn	Ser	Ser	Trp	Gly	Leu	Gln	Leu	Leu	Gly	Glu	Thr	Gln	Gly
	50					55					60				
Leu	Leu	Leu	His	Ser	Leu	Gln	Gly	Leu	Ser	Arg	Gln	Arg	Pro	Trp	Gly
65				70					75					80	
Gly	Glu	Ala	Pro	Ala	Trp	Ser	Leu	Pro	Ala	Pro	Pro	Met	Gln	Ala	Val
			85					90					95		
Glu	Gly	Arg	Thr	Arg	Arg	Arg	Thr	Arg	Arg						
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&lt;210&gt; 4103

&lt;211&gt; 3040

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4103

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&lt;210&gt; 4104

&lt;211&gt; 978

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4104

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			20					25					30		
Gln	Glu	Ser	Val	Asp	Thr	Gly	Glu	Glu	Glu	Glu	Gly	Gly	Asp	Glu	Ser
		35					40					45			
Asp	Leu	Ser	Ser	Glu	Ser	Ser	Ile	Lys	Lys	Lys	Ser	Gln	Glu	Glu	Arg
	50					55					60				
Lys	Asp	Arg	Gln	Ser	Leu	Asp	Lys	Pro	Ala	Arg	Lys	Arg	Arg	Arg	Arg

65					70					75					80
Ser	Arg	Lys	Lys	Pro	Ser	Gly	Ala	Leu	Gly	Ser	Glu	Ser	Tyr	Lys	Ser
				85					90					95	
Ser	Ala	Gly	Ser	Ala	Glu	Gln	Thr	Ala	Pro	Gly	Asp	Ser	Thr	Gly	Tyr
			100					105					110		
Met	Glu	Val	Ser	Leu	Asp	Ser	Leu	Asp	Leu	Arg	Val	Lys	Gly	Ile	Leu
		115					120					125			
Ser	Ser	Gln	Ala	Glu	Gly	Leu	Ala	Asn	Gly	Pro	Asp	Val	Leu	Glu	Thr
	130					135				140					
Asp	Gly	Leu	Gln	Glu	Val	Pro	Leu	Cys	Ser	Cys	Arg	Met	Glu	Thr	Pro
145					150					155					160
Lys	Ser	Arg	Glu	Ile	Thr	Thr	Leu	Ala	Asn	Asn	Gln	Cys	Met	Ala	Thr
				165					170					175	
Glu	Ser	Val	Asp	His	Glu	Leu	Gly	Arg	Cys	Thr	Asn	Ser	Val	Val	Lys
			180					185					190		
Tyr	Glu	Leu	Met	Arg	Pro	Ser	Asn	Lys	Ala	Pro	Leu	Leu	Val	Leu	Cys
		195					200					205			
Glu	Asp	His	Arg	Gly	Arg	Met	Val	Lys	His	Gln	Cys	Cys	Pro	Gly	Cys
	210					215					220				
Gly	Tyr	Phe	Cys	Thr	Ala	Gly	Asn	Phe	Met	Glu	Cys	Gln	Pro	Glu	Ser
225					230					235					240
Ser	Ile	Ser	His	Arg	Phe	His	Lys	Asp	Cys	Ala	Ser	Arg	Val	Asn	Asn
				245					250					255	
Ala	Ser	Tyr	Cys	Pro	His	Cys	Gly	Glu	Glu	Ser	Ser	Lys	Ala	Lys	Glu
			260					265					270		
Val	Thr	Ile	Ala	Lys	Ala	Asp	Thr	Thr	Ser	Thr	Val	Thr	Pro	Val	Pro
		275					280					285			
Gly	Gln	Glu	Lys	Gly	Ser	Ala	Xaa	Gly	Gly	Arg	Ala	Asp	Thr	Thr	Thr
	290					295					300				
Gly	Ser	Ala	Xaa	Pro	Gly	His	His	Ser	Arg	Arg	Thr	Thr	Ser	Cys	Arg
305					310					315					320
Val	Gln	Pro	Pro	Thr	Xaa	Pro	Glu	Gly	Phe	Asp	Pro	Thr	Gly	Pro	Ala
				325					330					335	
Gly	Leu	Gly	Arg	Pro	Thr	Pro	Gly	Leu	Ser	Gln	Gly	Pro	Gly	Lys	Glu
			340					345					350		
Thr	Leu	Glu	Ser	Ala	Leu	Ile	Ala	Leu	Asp	Ser	Glu	Lys	Pro	Lys	Lys
		355					360					365			
Leu	Arg	Phe	His	Pro	Lys	Gln	Leu	Tyr	Phe	Ser	Ala	Arg	Gln	Gly	Glu
	370					375					380				
Leu	Gln	Lys	Val	Leu	Leu	Met	Leu	Val	Asp	Gly	Ile	Asp	Pro	Asn	Phe
385					390					395					400
Lys	Met	Glu	His	Gln	Asn	Lys	Arg	Ser	Pro	Leu	His	Ala	Ala	Ala	Glu
				405					410					415	
Ala	Gly	His	Val	Asp	Ile	Cys	His	Met	Leu	Val	Gln	Ala	Gly	Ala	Asn
			420					425					430		
Ile	Asp	Thr	Cys	Ser	Glu	Asp	Gln	Arg	Thr	Pro	Leu	Met	Glu	Ala	Ala
	435						440					445			
Glu	Asn	Asn	His	Leu	Glu	Ala	Val	Lys	Tyr	Leu	Ile	Lys	Ala	Gly	Ala
	450					455					460				
Leu	Val	Asp	Pro	Lys	Asp	Ala	Glu	Gly	Ser	Thr	Cys	Leu	His	Leu	Ala
465					470					475					480
Ala	Lys	Lys	Gly	His	Tyr	Glu	Val	Val	Gln	Tyr	Leu	Leu	Ser	Asn	Gly
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3289

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<210> 4105
<211> 775
<212> DNA
<213> Homo sapiens
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<210> 4106  
<211> 186  
<212> PRT  
<213> Homo sapiens

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Lys Arg Met Pro Ser Gly Arg Gly Gly Arg Asp Arg Phe Thr Ala Glu
 20          25          30
Ser Tyr Thr Val Leu Gly Asp Thr Leu Ile Asp Gly Gly Glu His Tyr
 35          40          45
Trp Glu Val Arg Tyr Glu Pro Asp Ser Lys Ala Phe Gly Val Gly Val

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50	55	60
Ala Tyr Arg Ser Leu Gly Arg Phe Glu Gln Leu Gly Lys Thr Ala Ala		
65	70	75
Ser Trp Cys Leu His Ser Thr Ile Gly Cys Arg Ser Ala Ser Arg Lys		80
	85	90
His Ala Asn Lys Val Lys Val Leu Asp Ala Pro Val Pro Asp Cys Leu		95
	100	105
Gly Val His Cys Asp Phe His Gln Gly Leu Leu Ser Phe Tyr Asn Ala		110
	115	120
Arg Thr Lys Gln Val Leu His Thr Phe Lys Thr Arg Phe Thr Gln Pro		125
	130	135
Leu Leu Pro Ala Phe Thr Val Trp Cys Gly Ser Phe Gln Val Thr Thr		140
145	150	155
Gly Leu Gln Val Pro Ser Ala Val Arg Cys Leu Gln Lys Arg Gly Ser		160
	165	170
Ala Thr Ser Ser Ser Asn Thr Ser Leu Thr		175
	180	185

&lt;210&gt; 4107

&lt;211&gt; 1442

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4107

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 120  
 cgcgtcactg tcgggtcggc gagccacggg ggccgccgca gcaccatggc gaccaccgtc  
 180  
 agcactcagc gcgggcccgt gtacatcggg gagctcccgc aggacttcct ccgcatcacg  
 240  
 cccacacagc agcagcggca ggtccagctg gacgcccagg cggccagcag ctgcagtacg  
 300  
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 360  
 aattacggca tgaccgcgat ggaccctac tgccgactgc gcctgggcta cgcggtgtac  
 420  
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 720  
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 780  
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 1320  
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 1380  
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 1440  
 aa  
 1442

&lt;210&gt; 4108

&lt;211&gt; 273

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4108

Met	Ala	Thr	Thr	Val	Ser	Thr	Gln	Arg	Gly	Pro	Val	Tyr	Ile	Gly	Glu
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Leu	Pro	Gln	Asp	Phe	Leu	Arg	Ile	Thr	Pro	Thr	Gln	Gln	Gln	Arg	Gln
		20						25					30		
Val	Gln	Leu	Asp	Ala	Gln	Ala	Pro	Ser	Ser	Cys	Ser	Thr	Glu	Ala	Gln
	35						40					45			
Gly	Thr	Val	Gly	Arg	Leu	Asn	Ile	Thr	Val	Val	Gln	Ala	Lys	Leu	Ala
	50					55					60				
Lys	Asn	Tyr	Gly	Met	Thr	Arg	Met	Asp	Pro	Tyr	Cys	Arg	Leu	Arg	Leu
65					70					75				80	
Gly	Tyr	Ala	Val	Tyr	Glu	Thr	Pro	Thr	Ala	His	Asn	Gly	Ala	Lys	Asn
			85						90					95	
Pro	Arg	Trp	Asn	Lys	Val	Ile	His	Cys	Thr	Val	Pro	Pro	Gly	Val	Asp
			100					105					110		
Ser	Phe	Tyr	Leu	Glu	Ile	Phe	Asp	Glu	Arg	Ala	Phe	Ser	Met	Asp	Asp
	115						120						125		
Arg	Ile	Ala	Trp	Thr	His	Ile	Thr	Ile	Pro	Glu	Ser	Leu	Arg	Gln	Gly
	130					135						140			
Lys	Val	Glu	Asp	Lys	Trp	Tyr	Ser	Leu	Ser	Gly	Arg	Gln	Gly	Asp	Asp
145					150					155				160	
Lys	Glu	Gly	Met	Ile	Asn	Leu	Val	Met	Ser	Tyr	Ala	Leu	Leu	Pro	Ala
			165					170						175	
Ala	Met	Val	Met	Pro	Pro	Gln	Pro	Val	Val	Leu	Met	Pro	Thr	Val	Tyr
		180						185					190		
Gln	Gln	Gly	Val	Gly	Tyr	Val	Pro	Ile	Thr	Gly	Met	Pro	Ala	Val	Cys
	195						200						205		
Ser	Pro	Gly	Met	Val	Pro	Val	Ala	Leu	Pro	Pro	Ala	Ala	Val	Asn	Ala

210		215		220											
Gln	Pro	Arg	Cys	Ser	Glu	Glu	Asp	Leu	Lys	Ala	Ile	Gln	Asp	Met	Phe
225					230					235					240
Pro	Asn	Met	Asp	Gln	Glu	Val	Ile	Arg	Ser	Val	Leu	Glu	Ala	Gln	Arg
				245					250					255	
Gly	Asn	Lys	Asp	Ala	Ala	Ile	Asn	Ser	Leu	Leu	Gln	Met	Gly	Glu	Glu
			260					265					270		
Pro															

&lt;210&gt; 4109

&lt;211&gt; 1637

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4109

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 180  
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<210> 4110

<211> 375

<212> PRT

<213> Homo sapiens

<400> 4110

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			20					25					30		
Pro	Ile	Phe	Ser	Leu	Ala	Thr	Pro	Leu	Arg	Ala	Gly	Glu	Glu	Gly	Ser
		35					40					45			
His	Ser	Arg	Lys	Ser	Leu	Cys	Arg	Ser	Arg	Glu	Glu	Leu	Arg	Gly	Lys
	50					55					60				
Val	Arg	Glu	Leu	Ala	Ser	Ala	Val	Arg	Asn	Ala	Lys	Tyr	Leu	Val	Val
65				70					75					80	
Tyr	Thr	Gly	Ala	Gly	Ile	Ser	Thr	Ala	Ala	Ser	Ile	Pro	Asp	Tyr	Arg
			85					90					95		
Gly	Pro	Asn	Gly	Val	Trp	Thr	Leu	Leu	Gln	Lys	Gly	Arg	Ser	Val	Ser
			100					105					110		
Ala	Ala	Asp	Leu	Ser	Glu	Ala	Glu	Pro	Thr	Leu	Thr	His	Met	Ser	Ile
		115					120					125			
Thr	Arg	Leu	His	Glu	Gln	Lys	Leu	Val	Gln	His	Val	Val	Ser	Gln	Asn
	130					135					140				
Cys	Asp	Gly	Leu	His	Leu	Arg	Ser	Gly	Leu	Pro	Arg	Thr	Ala	Ile	Ser
145					150					155				160	
Glu	Leu	His	Gly	Asn	Met	Tyr	Ile	Glu	Val	Cys	Thr	Ser	Cys	Val	Pro
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Arg	Asp	Thr	Ile	Val	His	Phe	Gly	Glu	Arg	Gly	Thr	Leu	Gly	Gln	Pro
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<212> DNA
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<212> PRT

<213> Homo sapiens

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Leu	Glu	Ile	Thr	Gly	Gly	Gln	Val	Arg	Thr	Arg	Phe	Pro	Pro	Glu	Pro
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Asn	Gly	Ile	Leu	His	Ile	Gly	His	Ala	Lys	Ala	Ile	Asn	Phe	Asn	Phe
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Thr	Asn	Pro	Glu	Lys	Glu	Glu	Ala	Lys	Phe	Phe	Thr	Ala	Ile	Cys	Asp
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Met	Val	Ala	Trp	Leu	Gly	Tyr	Thr	Pro	Tyr	Lys	Val	Thr	Tyr	Ala	Ser



3298



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760

765

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 <212> DNA  
 <213> Homo sapiens

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<212> PRT

<213> Homo sapiens

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Pro	Ser	Pro	Asp	Arg	Phe	Gly	Met	Leu	Pro	Leu	Asp	Glu	Pro	Ala	Ile
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Thr	Glu	Asp	Lys	Ile	Ser	Leu	Leu	Leu	His	Leu	Leu	Glu	Asp	Glu	Leu
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Ser	Met	Thr	Asp	Leu	Asp	Ala	Ser	Phe	Gly	Leu	Thr	Ser	Ser	Pro	Ile
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Ser Trp Asp Ser Ser Ser	Pro Val Asp Arg Pro Glu Pro Glu Ala Ala			
	245	250	255	
Ser Pro Thr Thr Arg Thr Arg	Pro Val Thr Arg Ser Met Gly Thr Gly			
	260	265	270	
Asp Thr Pro Gly Leu Glu Val	Pro Ser Ser Xaa Ser Ala Glu Ser Gln			
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Phe Phe Asp Pro Thr Ser Gln His Arg	Asp Trp Cys Pro Trp Val Asn			
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Ile Thr Leu Gly Lys Glu Ser Arg Glu	Asn Gly Gly Thr Glu Pro Asp			
	325	330	335	
Ala Ser Ala Pro Ala Glu Pro Gly Trp	Lys Ala Val Leu Thr Ile Leu			
	340	345	350	
Leu Ala His Lys Gln Ser Ser Gln Pro	Ala Glu Thr Asp Ser Met Ser			
	355	360	365	
Leu Ser Glu Lys Ser Arg Lys Val Phe	Arg Ile Phe Arg Gln Trp Glu			
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Ser Leu Cys Ser Cys				
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&lt;211&gt; 1056

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4115

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 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
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 50 55 60  
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 65 70 75 80  
 Val Lys Ile Ser Arg Gln Gln Tyr Gln Asn Ala Leu Met Ala Ser Arg  
 85 90 95  
 Met Asp Lys Thr Pro Gln Ser Ser Asp Ser Glu Asn Thr Lys Ile Glu  
 100 105 110  
 Leu Thr Leu Thr Glu Leu His Asp Gly Leu Pro Asp Glu Thr Ala Asn  
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 <212> DNA  
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&lt;210&gt; 4118

&lt;211&gt; 128

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4118

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His	Leu	Gly	Pro	Gln	Ala	Gln	Pro	Ala	Val	Gln	Ala	His	Asp	Trp	Pro
		20						25					30		
Gly	Cys	Gly	Arg	Trp	Pro	Gln	Pro	Pro	Gly	Gly	Ile	Leu	Glu	Trp	Glu
		35					40					45			
Arg	Cys	Val	Gly	Cys	Pro	Arg	Pro	Ala	Arg	Pro	Ala	Ser	Pro	Ser	Pro
	50					55					60				
Gly	Glu	Ala	Thr	Pro	Pro	Pro	Ser	Ser	Gly	Ile	Ser	Ala	Val	Lys	Pro
65					70				75					80	
Pro	Leu	Arg	Ser	Pro	Arg	Thr	Leu	Pro	Leu	Glu	Leu	Gly	Thr	Gly	Gly
			85					90					95		
Cys	Val	Cys	Ala	Gly	Leu	Gly	Pro	Asn	Thr	Pro	Gly	Cys	Gln	Leu	His
			100				105						110		
Pro	Pro	Ala	Val	Leu	Cys	Pro	Gln	Gly	Leu	Gly	Arg	His	Gln	Arg	Leu
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&lt;211&gt; 649

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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 <212> PRT  
 <213> Homo sapiens

<400> 4120  
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 Cys Ile Leu Val Ser Ile Val Thr Glu Phe Val Ser Asn Pro Ala Thr  
 35 40 45  
 Ile Thr Ile Phe Leu Pro Ile Leu Cys Ser Leu Val Ser Asn Ala Glu  
 50 55 60  
 Leu Pro Asp Ile Gln Thr Gly Cys Pro Arg Gly Leu Glu Trp Gln Ala  
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<210> 4121  
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 <212> DNA  
 <213> Homo sapiens

<400> 4121  
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&lt;210&gt; 4122

&lt;211&gt; 494

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4122

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Arg	Ala	Val	Ser	Ala	Cys	Gln	Glu	Ile	Gln	Ala	Ile	Phe	Thr	Gln	Lys
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Arg	Leu	Glu	Glu	Tyr	Leu	Ile	Gly	Gln	Ser	Ile	Gly	Lys	Gly	Cys	Ser
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Val	Thr	Lys	Ser	Thr	Gly	Leu	Leu	Pro	Gly	Arg	Gly	Pro	Gly	Thr	Ser
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Ala	Leu	Leu	Gln	Arg	Glu	Ala	Ser	Lys	Arg	Pro	Ser	Ala	Arg	Val	Ala
			405						410					415	
Ala	Asn	Val	Leu	His	Leu	Ser	Leu	Trp	Gly	Glu	His	Ile	Leu	Ala	Leu
		420				425						430			
Lys	Asn	Leu	Lys	Leu	Asp	Lys	Met	Val	Gly	Trp	Leu	Leu	Gln	Gln	Ser
		435				440						445			
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		450				455					460				
Thr	Lys	Met	Lys	Met	Leu	Phe	Leu	Ala	Asn	Leu	Glu	Cys	Glu	Thr	Leu
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Cys	Gln	Ala	Ala	Leu	Leu	Cys	Ser	Trp	Arg	Ala	Ala	Leu			
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&lt;210&gt; 4123

&lt;211&gt; 1095

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4123

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&lt;210&gt; 4124

&lt;211&gt; 155

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4124

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			20					25					30		
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		35					40					45			
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			85						90					95	
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Ile	His	Lys	Ala	Ala	Arg	Ser	Gly	Ser	Leu	Glu	Cys	Ile	Ser	Ala	Leu
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&lt;210&gt; 4125

&lt;211&gt; 4711

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4125

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<210> 4126

<211> 820

<212> PRT

<213> Homo sapiens

<400> 4126

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Gly	Pro	Gly	Pro	Gly	Arg	Gly	Ala	Ala	Gly	Leu	Ser	Pro	Ala	Asp	Ile	20	25	30	
Ala	Leu	Ala	Ser	Glu	Gln	Gly	Ala	Ser	Cys	Ser	Val	Arg	Ala	Pro	Glu	35	40	45	
Arg	Lys	Leu	Arg	Met	Lys	Leu	Leu	Trp	Gln	Ala	Lys	Met	Ser	Ser	Ile	50	55	60	
Gln	Asp	Trp	Gly	Glu	Glu	Val	Glu	Glu	Gly	Ala	Val	Tyr	His	Val	Thr	65	70	75	80
Leu	Lys	Arg	Val	Gln	Ile	Gln	Gln	Ala	Ala	Asn	Lys	Gly	Ala	Arg	Trp	85	90	95	
Leu	Gly	Val	Glu	Gly	Asp	Gln	Leu	Pro	Pro	Gly	His	Thr	Val	Ser	Gln	100	105	110	
Tyr	Glu	Thr	Cys	Lys	Ile	Arg	Thr	Ile	Lys	Ala	Gly	Thr	Leu	Glu	Lys	115	120	125	
Leu	Val	Glu	Asn	Leu	Leu	Thr	Ala	Phe	Gly	Asp	Asn	Asp	Phe	Thr	Tyr	130	135	140	
Ile	Ser	Ile	Phe	Leu	Ser	Thr	Tyr	Arg	Gly	Phe	Ala	Ser	Thr	Lys	Glu	145	150	155	160
Val	Leu	Glu	Leu	Leu	Leu	Asp	Arg	Tyr	Gly	Asn	Leu	Thr	Ser	Pro	Asn	165	170	175	
Cys	Glu	Glu	Asp	Gly	Ser	Gln	Ser	Ser	Ser	Glu	Ser	Lys	Met	Val	Ile	180	185	190	
Arg	Asn	Ala	Ile	Ala	Ser	Ile	Leu	Arg	Ala	Trp	Leu	Asp	Gln	Cys	Ala	195	200	205	
Glu	Asp	Phe	Arg	Glu	Pro	Pro	His	Phe	Pro	Cys	Leu	Gln	Lys	Leu	Leu	210	215	220	
Asp	Tyr	Leu	Thr	Arg	Met	Met	Pro	Gly	Ser	Asp	Pro	Glu	Arg	Arg	Ala	225	230	235	240
Gln	Asn	Leu	Leu	Glu	Gln	Phe	Gln	Lys	Gln	Glu	Val	Glu	Thr	Asp	Asn	245	250	255	
Gly	Leu	Pro	Asn	Thr	Ile	Ser	Phe	Ser	Leu	Glu	Glu	Glu	Glu	Glu	Leu	260	265	270	
Glu	Gly	Gly	Glu	Ser	Ala	Glu	Phe	Thr	Cys	Phe	Ser	Glu	Asp	Leu	Val	275	280	285	
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Lys Thr Gln Gln Arg Ala Lys Ile Ile Glu Lys Trp Ile Asn Ile Ala  
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725 730 735  
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 Val Ile Ser Glu Asp Lys Glu Leu Val Ile Pro Asp Ser Ala Asn Val  
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 Phe Tyr Ala Met Asn Ser Gln Val Asn Phe Asp Phe Ile Leu Arg Lys  
 770 775 780  
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&lt;210&gt; 4127

&lt;211&gt; 2189

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4127

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<210> 4128

<211> 445

<212> PRT

<213> Homo sapiens

<400> 4128

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Arg	Tyr	Asp	Ile	Val	Phe	Leu	Pro	Pro	Ser	Phe	Pro	Ile	Val	Ala	Met
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 Gly Leu Ala Thr Tyr Ala Gln Arg Arg Ile Thr Thr Glu Thr Tyr Gly  
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 Gly Asp Pro Gln Arg Phe Asp Asp Phe Leu Arg Ala Tyr Val Glu Lys  
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 Ser Phe Phe Pro Glu Leu Lys Glu Gln Ser Val Asp Cys Arg Ala Gly  
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&lt;210&gt; 4129

&lt;211&gt; 1749

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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<210> 4130

<211> 523

<212> PRT

<213> Homo sapiens

<400> 4130

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Val	Val	Asp	Gln	Gly	Ala	Gly	Ala	Ser	Arg	Gly	Gly	Asn	Thr	Arg	Lys
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Ser	Leu	Glu	Asp	Asn	Gly	Ser	Thr	Arg	Val	Thr	Pro	Ser	Val	Gln	Pro
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His	Leu	Gln	Pro	Ile	Arg	Asn	Met	Ser	Val	Ser	Arg	Thr	Met	Glu	Asp
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Ser	Cys	Glu	Leu	Asp	Leu	Val	Tyr	Val	Thr	Glu	Arg	Ile	Ile	Ala	Val
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Ser	Phe	Pro	Ser	Thr	Ala	Asn	Glu	Glu	Asn	Phe	Arg	Ser	Asn	Leu	Arg
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Glu	Val	Ala	Gln	Met	Leu	Lys	Ser	Lys	His	Gly	Gly	Asn	Tyr	Leu	Leu
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Phe	Asn	Leu	Ser	Glu	Arg	Arg	Pro	Asp	Ile	Thr	Lys	Leu	His	Ala	Lys
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Val	Leu	Glu	Phe	Gly	Trp	Pro	Asp	Leu	His	Thr	Pro	Ala	Leu	Glu	Lys
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Ile	Cys	Ser	Ile	Cys	Lys	Ala	Met	Asp	Thr	Trp	Leu	Asn	Ala	Asp	Pro
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Val	Val	Ile	Ala	Ala	Tyr	Met	His	Tyr	Ser	Asn	Ile	Ser	Ala	Ser	Ala
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Gly	Cys	Arg	Pro	Phe	Leu	Arg	Ile	Tyr	Gln	Ala	Met	Gln	Pro	Val	Tyr
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Thr	Ser	Gly	Ile	Tyr	Asn	Ile	Pro	Gly	Asp	Ser	Gln	Thr	Ser	Val	Cys
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<211> 608
<212> DNA
<213> Homo sapiens
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 1646

&lt;210&gt; 4134

&lt;211&gt; 329

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4134

Met Glu Val Ala Glu Pro Ser Ser Pro Thr Glu Glu Glu Glu Glu  
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<210> 4135
<211> 388
<212> DNA
<213> Homo sapiens
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180
catggatctt gaggaccac gaccaatctt tgactggatg cagatcatcc gcaaacgggc
240
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agtgggtctat gtcggcctgg acgctttatc tgatacagag gtagctgcag cggtgggcaa  
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 388

<210> 4136  
 <211> 123  
 <212> PRT  
 <213> Homo sapiens

<400> 4136  
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 20 25 30  
 Ser Leu Leu Pro Leu Leu Glu Lys Leu Thr Thr Gly Arg Ile Ala Glu  
 35 40 45  
 Leu Leu Ser Pro Asp Tyr Met Asp Leu Glu Asp Pro Arg Pro Ile Phe  
 50 55 60  
 Asp Trp Met Gln Ile Ile Arg Lys Arg Ala Val Val Tyr Val Gly Leu  
 65 70 75 80  
 Asp Ala Leu Ser Asp Thr Glu Val Ala Ala Val Gly Asn Ser Met  
 85 90 95  
 Phe Ser Asp Leu Val Ser Val Ala Gly His Ile Tyr Lys Phe Gly Ile  
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 Asp Asp Gly Leu Pro Gly Ala Thr Gly Gly Lys  
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<210> 4137  
 <211> 2255  
 <212> DNA  
 <213> Homo sapiens

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 420  
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 480  
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660  
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720  
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1380  
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1440  
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1560  
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1860  
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1980  
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2040  
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2100  
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2160

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 2255

<210> 4138  
 <211> 353  
 <212> PRT  
 <213> Homo sapiens

<400> 4138  
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 Asn Val Glu Ala Val Asp Pro Arg Gly Arg Thr Leu Leu His Leu Ala  
 35 40 45  
 Val Ser Leu Gly His Leu Glu Ser Ala Arg Val Leu Leu Arg His Lys  
 50 55 60  
 Ala Asp Val Thr Lys Glu Asn Arg Gln Gly Trp Thr Val Leu His Glu  
 65 70 75 80  
 Ala Val Ser Thr Gly Asp Pro Glu Met Val Tyr Thr Val Leu Gln His  
 85 90 95  
 Arg Asp Tyr His Asn Thr Ser Met Ala Leu Glu Gly Val Pro Glu Leu  
 100 105 110  
 Leu Gln Lys Ile Leu Glu Ala Pro Asp Phe Tyr Val Gln Met Lys Trp  
 115 120 125  
 Glu Phe Thr Ser Trp Val Pro Leu Val Ser Arg Ile Cys Pro Asn Asp  
 130 135 140  
 Val Cys Arg Ile Trp Lys Ser Gly Ala Lys Leu Arg Val Asp Ile Thr  
 145 150 155 160  
 Leu Leu Gly Phe Glu Asn Met Ser Trp Ile Arg Gly Arg Arg Ser Phe  
 165 170 175  
 Ile Phe Lys Gly Glu Asp Asn Trp Ala Glu Leu Met Glu Val Asn His  
 180 185 190  
 Asp Asp Lys Val Val Thr Thr Glu Arg Phe Asp Leu Ser Gln Glu Met  
 195 200 205  
 Glu Arg Leu Thr Leu Asp Leu Met Lys Pro Lys Ser Arg Glu Val Glu  
 210 215 220  
 Arg Arg Leu Thr Ser Pro Val Ile Asn Thr Ser Leu Asp Thr Lys Asn  
 225 230 235 240  
 Ile Ala Phe Glu Arg Thr Lys Ser Gly Phe Trp Gly Trp Arg Thr Asp  
 245 250 255  
 Lys Ala Glu Val Val Asn Gly Tyr Glu Ala Lys Val Tyr Thr Val Asn  
 260 265 270  
 Asn Val Asn Val Ile Thr Lys Ile Arg Thr Glu His Leu Thr Glu Glu  
 275 280 285  
 Glu Lys Lys Arg Tyr Lys Ala Asp Arg Asn Pro Leu Glu Ser Leu Leu  
 290 295 300  
 Gly Thr Val Glu His Gln Phe Gly Ala Gln Gly Asp Leu Thr Thr Glu  
 305 310 315 320  
 Cys Ala Thr Ala Asn Asn Pro Thr Ala Ile Thr Pro Asp Glu Tyr Phe  
 325 330 335  
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340                      345                      350

Ser

<210> 4139  
 <211> 431  
 <212> DNA  
 <213> Homo sapiens

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 180  
 cgacactgcc cccacacacag ccgggaagtc cacctttctc aagaagcacc tcgtgtcggc  
 240  
 cggatatgtc cacgtgaaca gggatatgacc aggccttttg cgccccaat ctattataaa  
 300  
 gtcccatct ccacctctca actggtttgg ggcggcttcc ctccatcatt gcctccccgt  
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 431

<210> 4140  
 <211> 50  
 <212> PRT  
 <213> Homo sapiens

<400> 4140  
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 20                      25                      30  
 Val Val Ala Val Gly Phe Pro Gly Gly Lys Cys Pro Val Pro Val Arg  
 35                      40                      45  
 Val Pro  
 50

<210> 4141  
 <211> 1182  
 <212> DNA  
 <213> Homo sapiens

<400> 4141  
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 180



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 300  
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 420  
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 480  
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 aatgtcttcg caagtgccat gatgcatgcc ttagaagtgt taaattcaca ggaaacaggg  
 600  
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 660  
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 720  
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 780  
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 960  
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 1182

&lt;210&gt; 4142

&lt;211&gt; 311

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4142

Met	Ser	Glu	Gln	Ser	Ile	Cys	Gln	Ala	Arg	Ala	Ala	Val	Met	Val	Tyr
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Asp	Asp	Ala	Asn	Lys	Lys	Trp	Val	Pro	Ala	Gly	Gly	Ser	Thr	Gly	Phe
			20					25					30		
Ser	Arg	Val	His	Ile	Tyr	His	His	Thr	Gly	Asn	Asn	Thr	Phe	Arg	Val
		35					40					45			
Val	Gly	Arg	Lys	Ile	Gln	Asp	His	Gln	Val	Val	Ile	Asn	Cys	Ala	Ile
	50					55					60				
Pro	Lys	Gly	Leu	Lys	Tyr	Asn	Gln	Ala	Thr	Gln	Thr	Phe	His	Gln	Trp
65					70				75					80	
Arg	Asp	Ala	Arg	Gln	Val	Tyr	Gly	Leu	Asn	Phe	Gly	Ser	Lys	Glu	Asp
			85					90						95	
Ala	Asn	Val	Phe	Ala	Ser	Ala	Met	Met	His	Ala	Leu	Glu	Val	Leu	Asn

<210> 4143  
<211> 1773  
<212> DNA  
<213> Homo sapiens

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240
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420
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480
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600

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 1680  
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 1740  
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 1773

&lt;210&gt; 4144

&lt;211&gt; 231

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4144

Met	Ala	Ser	Ala	Val	Phe	Glu	Gly	Thr	Ser	Leu	Val	Asn	Met	Phe	Val
1				5				10						15	
Arg	Gly	Cys	Trp	Val	Asn	Gly	Ile	Arg	Arg	Leu	Ile	Val	Ser	Arg	Arg
			20					25					30		
Gly	Asp	Glu	Glu	Glu	Phe	Phe	Glu	Ile	Arg	Thr	Glu	Trp	Ser	Asp	Arg
	35						40					45			
Ser	Val	Leu	Tyr	Leu	His	Arg	Ser	Leu	Ala	Asp	Leu	Gly	Arg	Leu	Trp

50		55		60
Gln Arg Leu Arg Asp Ala Phe Pro Glu Asp Arg Ser Glu Leu Ala Gln				
65		70		80
Gly Pro Leu Arg Gln Gly Leu Val Ala Ile Lys Glu Ala His Asp Ile				
	85		90	95
Glu Thr Arg Leu Asn Glu Val Glu Lys Leu Leu Lys Thr Ile Ile Ser				
	100		105	110
Met Pro Cys Lys Tyr Ser Arg Ser Glu Val Val Leu Thr Phe Phe Glu				
	115		120	125
Arg Ser Pro Leu Asp Gln Val Leu Lys Asn Asp Asn Val His Lys Ile				
	130		135	140
Gln Pro Ser Phe Gln Ser Pro Val Lys Ile Ser Glu Ile Met Arg Ser				
145		150		160
Asn Gly Phe Cys Leu Ala Asn Thr Glu Thr Ile Val Ile Asp His Ser				
	165		170	175
Ile Pro Asn Gly Arg Asp Gln Gln Leu Gly Val Asp Pro Thr Glu His				
	180		185	190
Leu Phe Glu Asn Gly Ser Glu Phe Pro Ser Glu Leu Glu Asp Gly Asp				
	195		200	205
Asp Pro Ala Ala Tyr Val Thr Asn Leu Ser Tyr Tyr His Leu Val Pro				
	210		215	220
Phe Glu Thr Asp Ile Trp Asp				
225		230		

&lt;210&gt; 4145

&lt;211&gt; 400

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4145

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 400

&lt;210&gt; 4146

&lt;211&gt; 133

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4146

Xaa Thr Leu Glu Met Leu Ala Gly Asp Pro Leu Leu Ser Glu Asp Pro  
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 Glu Pro Asp Lys Thr Pro Ala Ala Thr Val Thr Asn Glu Ala Ser Cys

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<210> 4147
<211> 4892
<212> DNA
<213> Homo sapiens
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 180  
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 240  
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 420  
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 720  
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1140  
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1260  
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1320  
aagtacagac cttcccacag tgacaaagca gccaatccgg aggttctgaa atggacaaat  
1380  
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 <212> PRT  
 <213> Homo sapiens

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 Asp Ser Glu Ser Gly Thr Leu Ser Ala Ser Ser Ala Thr Ser Ala Arg  
 65 70 75 80  
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 Asp Lys Gly Leu Ile Asn Lys Glu Asn Thr Pro Ser Gly Phe Asn His  
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195 200 205  
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Asp Gln Glu Glu Ser Phe Val Ser Glu Val Pro Gln Ser Asp Leu Thr  
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Ser Trp Gln Arg Glu Asn Ser Asp Ser Asp Glu Ala His Leu Ser Pro  
260 265 270  
Gln Ala Gly Arg Leu Ile Arg Gln Leu Leu Asp Glu Asp Ser Asp Pro  
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Asp Asp Thr Glu Val Pro Pro Ser Pro Pro Asn Ser His Ser Phe Met  
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Asn	Val	Gln	Lys	Glu	Asp	Arg	Thr	Pro	Met	Ala	Glu	Glu	Tyr	Ser	Glu
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&lt;210&gt; 4149

&lt;211&gt; 1396

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4149

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<210> 4150

<211> 193

<212> PRT

<213> Homo sapiens

<400> 4150

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			20					25					30		
His	Ile	Lys	Arg	Ile	Thr	Asp	Asn	Asp	Ile	Gln	Ser	Leu	Val	Leu	Glu
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Pro	Lys	Lys	Thr	Leu	Gly	Ile	Lys	Leu	Pro	Phe	Leu	Val	Met	Ile	Ile
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Lys	Asn	Leu	Lys	Lys	Tyr	Phe	Thr	Phe	Glu	Val	Gln	Val	Leu	Asp	Asp
			85						90					95	
Lys	Asn	Val	Arg	Arg	Arg	Phe	Arg	Ala	Ser	Asn	Tyr	Gln	Ser	Thr	Thr
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Arg	Val	Lys	Pro	Phe	Ile	Cys	Thr	Met	Pro	Met	Arg	Leu	Asp	Asp	Gly
			115				120					125			
Trp	Asn	Gln	Ile	Gln	Phe	Asn	Leu	Leu	Asp	Phe	Thr	Arg	Arg	Ala	Tyr
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Gly	Thr	Asn	Tyr	Ile	Glu	Thr	Leu	Arg	Val	Gln	Ile	His	Ala	Asn	Cys
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<210> 4151

<211> 1372

<212> DNA

<213> Homo sapiens

<400> 4151

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&lt;210&gt; 4152

&lt;211&gt; 97

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4152

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Ser	Glu	Pro	Ala	Ser	Val	Ala	Pro	Asn	Gln	Asn	Leu	Leu	Cys	Ala	Pro		
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Arg	Pro	Pro	Ser	Thr	Phe	Met	Ser	Val	Leu	Leu	Leu	Arg	Gly	Gln	Val		
65					70				75					80			
Leu	Pro	Ser	Leu	Thr	Ala	Leu	Ala	Arg	Pro	Ala	Arg	Phe	Pro	Ser	Asn		
				85				90					95				
Pro																	

&lt;210&gt; 4153

&lt;211&gt; 395

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4153

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 395

&lt;210&gt; 4154

&lt;211&gt; 110

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4154

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Asn	Gly	Lys	Met	Ser	Pro	Thr	Arg	Phe	His	Ala	Asn	Ser	Met	Gly	Gln		
	35					40				45							
Arg	Ser	Tyr	Ser	Phe	Glu	Ala	Ser	Glu	Glu	Asp	Leu	Asp	Val	Asn	Asp		
	50				55					60							
Lys	Val	Glu	Glu	Leu	Met	Arg	Arg	Asp	Ser	Ser	Val	Ile	Lys	Glu	Glu		
65				70				75						80			
Ile	Lys	Ala	Phe	Leu	Ala	Asn	Arg	Arg	Ile	Ser	Gln	Ala	Val	Asp	Thr		
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<211> 1191  
<212> DNA  
<213> Homo sapiens

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<210> 4156  
<211> 233  
<212> PRT  
<213> Homo sapiens

<400> 4156  
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Pro Gly Gln Arg Gly Phe Trp Phe Asp Ala Glu Ile Thr Thr Leu Lys			
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Thr Ile Ser Arg Thr Lys Lys Glu Leu Arg Val Lys Ile Phe Leu Gly			
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Gly Ser Glu Gly Thr Leu Asn Asp Cys Lys Ile Ile Ser Val Asp Glu			
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Ile Phe Lys Ile Glu Arg Pro Gly Ala His Pro Leu Ser Phe Ala Asp			
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Gly Lys Phe Leu Arg Arg Asn Asp Pro Glu Cys Asp Leu Cys Gly Gly			
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Asp Pro Glu Lys Lys Cys His Ser Cys Ser Cys Arg Val Cys Gly Gly			
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Lys His Glu Pro Asn Met Gln Leu Leu Cys Asp Glu Cys Asn Val Ala			
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Tyr His Ile Tyr Cys Leu Asn Pro Pro Leu Asp Lys Val Pro Glu Glu			
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Glu Tyr Trp Tyr Cys Pro Ser Cys Lys Thr Asp Ser Ser Glu Val Val			
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&lt;210&gt; 4157

&lt;211&gt; 3460

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4157

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&lt;210&gt; 4158

&lt;211&gt; 463

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4158

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<211> 360

<212> PRT

<213> Homo sapiens

<400> 4160

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		35					40					45			
Lys	Phe	Ser	Ile	Arg	Asn	Arg	Arg	His	His	Cys	Arg	Leu	Cys	Gly	Ser
	50					55					60				
Ile	Met	Cys	Lys	Lys	Cys	Met	Glu	Leu	Ile	Ser	Leu	Pro	Leu	Ala	Asn
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Lys	Leu	Thr	Ser	Ala	Ser	Lys	Glu	Ser	Leu	Ser	Thr	His	Thr	Ser	Pro
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Ser	Gln	Ser	Pro	Asn	Ser	Val	His	Gly	Ser	Arg	Arg	Gly	Ser	Ile	Ser
			100					105					110		
Ser	Met	Ser	Ser	Val	Ser	Ser	Val	Leu	Asp	Glu	Lys	Asp	Asp	Asp	Arg
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Ile	Arg	Cys	Cys	Thr	His	Cys	Lys	Asp	Thr	Leu	Leu	Lys	Arg	Glu	Gln
	130					135					140				
Gln	Ile	Asp	Glu	Lys	Glu	His	Thr	Pro	Asp	Ile	Val	Lys	Leu	Tyr	Glu
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Lys	Leu	Arg	Leu	Cys	Met	Glu	Lys	Val	Asp	Gln	Lys	Ala	Pro	Glu	Tyr
			165						170					175	
Ile	Arg	Met	Ala	Ala	Ser	Leu	Asn	Ala	Gly	Glu	Thr	Thr	Tyr	Ser	Leu
		180						185						190	
Glu	His	Ala	Ser	Asp	Leu	Arg	Val	Glu	Val	Gln	Lys	Val	Tyr	Glu	Leu
	195						200					205			
Ile	Asp	Ala	Leu	Ser	Lys	Lys	Ile	Leu	Thr	Leu	Gly	Leu	Asn	Gln	Asp
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Pro	Pro	Pro	His	Pro	Ser	Asn	Leu	Arg	Leu	Gln	Arg	Met	Ile	Arg	Tyr
225					230					235					240
Ser	Ala	Thr	Leu	Phe	Val	Gln	Glu	Lys	Leu	Leu	Gly	Leu	Met	Ser	Leu
			245						250					255	
Pro	Thr	Lys	Glu	Gln	Phe	Glu	Glu	Leu	Lys	Lys	Lys	Arg	Lys	Glu	Glu
		260						265					270		
Met	Glu	Arg	Lys	Arg	Ala	Val	Glu	Arg	Gln	Ala	Ala	Leu	Glu	Ser	Gln
	275						280					285			
Arg	Arg	Leu	Glu	Glu	Arg	Gln	Ser	Gly	Leu	Ala	Ser	Arg	Ala	Ala	Asn
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Gly	Glu	Val	Ala	Ser	Leu	Arg	Arg	Gly	Pro	Ala	Pro	Leu	Lys	Lys	Ala
305					310					315					320
Glu	Gly	Trp	Leu	Pro	Leu	Ser	Gly	Gly	Gln	Gly	Gln	Ser	Glu	Asp	Ser
			325						330					335	
Asp	Pro	Leu	Leu	Gln	Gln	Ile	His	Asn	Ile	Thr	Ser	Phe	Ile	Arg	Gln



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355 360

345

350

<210> 4161  
<211> 3316  
<212> DNA  
<213> Homo sapiens

<400> 4161  
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<210> 4162

<211> 859

<212> PRT

<213> Homo sapiens

<400> 4162

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Glu	His	Ser	Glu	Asn	Val	His	Ile	Ser	Gly	Val	Ser	Thr	Ala	Cys	Gly
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Asp	Ser	Ser	Asp	Glu	Glu	Ile	Cys	Ala	Lys	Glu	Ala	Asn	Pro	Pro	Thr
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Ala	Ala	Ala	Phe	Gln	Pro	Cys	Ala	Tyr	Asn	Gln	Phe	Gln	Cys	Leu	Ser
	210					215						220			
Arg	Phe	Thr	Lys	Val	Tyr	Thr	Cys	Leu	Pro	Glu	Ser	Leu	Lys	Cys	Asp
225					230					235					240
Gly	Asn	Ile	Asp	Cys	Leu	Asp	Leu	Gly	Asp	Glu	Ile	Asp	Cys	Asp	Val
			245					250					255		
Pro	Thr	Cys	Gly	Gln	Trp	Leu	Lys	Tyr	Phe	Tyr	Gly	Thr	Phe	Asn	Ser

3350

690	695	700
Ala Asp Asn Gly Arg Asp Val Thr Ser Val Glu Pro Pro Ser Val Ser		
705	710	715
Pro Ala Arg His Gln Leu Thr Ser Ala Leu Ser Arg Met Thr Gln Gly		720
	725	730
Leu Arg Trp Val Arg Phe Thr Leu Gly Arg Ser Ser Ser Leu Ser Gln		735
	740	745
Asn Gln Ser Pro Leu Arg Gln Leu Asp Asn Gly Val Ser Gly Arg Glu		750
	755	760
Asp Asp Asp Asp Val Glu Met Leu Ile Pro Ile Ser Asp Gly Ser Ser		765
	770	775
Asp Phe Asp Val Asn Asp Cys Ser Arg Pro Leu Leu Asp Leu Ala Ser		780
	785	790
Asp Gln Gly Gln Gly Leu Arg Gln Pro Tyr Asn Ala Thr Asn Pro Gly		795
	805	810
Val Arg Pro Ser Asn Arg Asp Gly Pro Cys Glu Arg Cys Gly Ile Val		815
	820	825
His Thr Ala Gln Ile Pro Asp Thr Cys Leu Glu Val Thr Leu Lys Asn		830
	835	840
Glu Thr Ser Asp Asp Glu Ala Leu Leu Leu Cys		845
850	855	

&lt;210&gt; 4163

&lt;211&gt; 568

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4163

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120
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180
gtgttgcccc agtggctctg ggggatgaag gggatcccgg tcccatctgg acaccctcaa
240
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300
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tcgcccccg cgtgggctgc cccagtgcct tggaacctgc tgccttgggg accctggacg
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tgccgacata tggccattga gctccaac
568

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&lt;210&gt; 4164

&lt;211&gt; 187

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4164

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Asn Leu Ser Leu Trp Pro Gly Gln Ala Gln Asp Arg Leu Pro Ser Ala
 1           5           10           15
Arg Pro Thr Pro Gly Leu Pro Gly Gln Ser Gly His Gly Ser Leu Gln
      20           25           30
Cys Gly Leu Gln Asp Pro Ala Gly Ser Arg Pro Leu Ser Pro Pro Phe
      35           40           45
Ser Arg Leu Arg Ser Glu Gly Ser Lys Ser Val Leu Pro Gln Trp Leu
      50           55           60
Trp Gly Met Lys Gly Ile Pro Val Pro Ser Gly His Pro Gln Ala Asp
65           70           75           80
Gly Arg Arg Ala Leu Val Arg Ala Val Gly His Pro Gln Asp Leu Leu
      85           90           95
Thr Glu Ala Ser Pro Arg Cys Pro Ala Gly Pro Ser Pro Leu Arg Ser
      100          105          110
Thr Gly Arg Lys Pro Pro Gly Pro Pro Arg Gly Gly Asp Leu Ala Ala
      115          120          125
Pro Val Leu Phe Lys Ala Trp Ala Thr Ser Leu Ala Cys Pro Lys Trp
      130          135          140
Gln Ala Leu Arg Arg Ala Arg Met Val Pro Val Val Gln Gly Ser Pro
145          150          155          160
Pro Ala Trp Ala Ala Pro Val Pro Trp Asn Leu Leu Pro Trp Gly Pro
      165          170          175
Trp Thr Cys Arg His Met Ala Ile Glu Leu Gln
      180          185

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&lt;210&gt; 4165

&lt;211&gt; 717

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4165

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120
ctgctggact gcgccaggcg tatectggag agggaggggc cccgtgcctt ctaccgcggc
180
tacctcccca acgtgctggg catcatcccc tatgcgggca tcgacctggc cgtctacgag
240
actctgaaga actggtggct tcagcagtac agccacgact cggcagaccc aggcacctc
300
gtgctcctgg cctgcggtac catatccagc acctgcggcc agatagccag ttaccgctg
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540
caatagccat gtaactgagc ttggaagagg atcttgctgt cctggccaac atctcactgc
600
aattctatca gttgaattcc ctggatagtc caagctttgt ggatccctcc accagaacaa
660

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717

<210> 4166

<211> 166

<212> PRT

<213> Homo sapiens

<400> 4166

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Gln	Thr	Ile	Ile	Tyr	Pro	Met	Glu	Val	Leu	Lys	Thr	Arg	Leu	Thr	Leu
		20						25					30		
Arg	Arg	Thr	Gly	Gln	Tyr	Lys	Gly	Leu	Leu	Asp	Cys	Ala	Arg	Arg	Ile
		35					40					45			
Leu	Glu	Arg	Glu	Gly	Pro	Arg	Ala	Phe	Tyr	Arg	Gly	Tyr	Leu	Pro	Asn
	50					55				60					
Val	Leu	Gly	Ile	Ile	Pro	Tyr	Ala	Gly	Ile	Asp	Leu	Ala	Val	Tyr	Glu
65					70					75					80
Thr	Leu	Lys	Asn	Trp	Trp	Leu	Gln	Gln	Tyr	Ser	His	Asp	Ser	Ala	Asp
			85						90					95	
Pro	Gly	Ile	Leu	Val	Leu	Leu	Ala	Cys	Gly	Thr	Ile	Ser	Ser	Thr	Cys
			100					105						110	
Gly	Gln	Ile	Ala	Ser	Tyr	Pro	Leu	Ala	Leu	Val	Arg	Thr	Arg	Met	Gln
		115					120					125			
Ala	Gln	Gly	Phe	His	His	Val	Ala	Gln	Ala	His	Leu	Glu	Leu	Val	Gly
	130					135				140					
Ser	Arg	Asn	Ser	Pro	Ala	Phe	Ser	Leu	Pro	Thr	Cys	Trp	Asp	Tyr	Arg
145					150					155					160
Lys	Pro	Val	Val	Met	Pro										
				165											

<210> 4167

<211> 897

<212> DNA

<213> Homo sapiens

<400> 4167

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120  
gatctcagcc caccgcaact tccgcctcct gggatcaagc aatcctcctg cttcagcctc  
180  
ctgagtagct tggactacag atatggccgc gtggaaagtg tcaaaattct tcccaagagg  
240  
ggatctgaag gaggagtggc tgcctttgtg gattttgtgg acatcaaaag tgcacagaaa  
300  
gctcacaact cgggtcaacaa aatgggtgac agagacctac gcacggatta taatgaacca  
360  
ggcaccatcc cgagtgtctgc tcggggattg gatgatacag tttccatagc atctcgtagt  
420  
agagaggttt ctgggttcag aggaggtggt ggagggcctg cttatgggtcc cccaccgtca  
480



cttcatgcac gagaaggacg ttatgagcgg agacttgatg gggcttcaga taacagggag  
 540  
 cgtgcttatg aacatagtgc ctatggacac catgaacggg ggacgggagg atttgatcgg  
 600  
 acaagacatt acgatcagga ttactataga gatcctcgag agcggacttt acaacatggg  
 660  
 ctctattacg cttctcggag tcgaagtcca aatcgctttg atgctcatga cccccgatat  
 720  
 gaacctaggg ctcgcgagca gtttacactg cccagtgtgg tacacagggg tatctacagg  
 780  
 gatgatatta cccgggaggt acgaggcaga aggccagagc ggaattacca gcacagcagg  
 840  
 agtcggtcac cacattcatc ccagtctaga aatcagtctc ctcagagact ggctagc  
 897

&lt;210&gt; 4168

&lt;211&gt; 299

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4168

Xaa	Arg	His	Ala	Ala	Gln	His	Gly	Pro	Gly	Asn	Gln	Ala	Ser	Leu	Gly	1	5	10	15
Gly	Gln	Phe	Thr	Arg	Glu	Arg	Ala	Gly	Arg	Glu	Asp	His	Arg	Ala	Phe	20	25	30	
Gln	Thr	Ala	Gly	Val	Gln	Trp	Arg	Asp	Leu	Ser	Pro	Pro	Gln	Leu	Pro	35	40	45	
Pro	Pro	Gly	Ile	Lys	Gln	Ser	Ser	Cys	Phe	Ser	Leu	Leu	Ser	Ser	Leu	50	55	60	
Asp	Tyr	Arg	Tyr	Gly	Arg	Val	Glu	Ser	Val	Lys	Ile	Leu	Pro	Lys	Arg	65	70	75	80
Gly	Ser	Glu	Gly	Gly	Val	Ala	Ala	Phe	Val	Asp	Phe	Val	Asp	Ile	Lys	85	90	95	
Ser	Ala	Gln	Lys	Ala	His	Asn	Ser	Val	Asn	Lys	Met	Gly	Asp	Arg	Asp	100	105	110	
Leu	Arg	Thr	Asp	Tyr	Asn	Glu	Pro	Gly	Thr	Ile	Pro	Ser	Ala	Ala	Arg	115	120	125	
Gly	Leu	Asp	Asp	Thr	Val	Ser	Ile	Ala	Ser	Arg	Ser	Arg	Glu	Val	Ser	130	135	140	
Gly	Phe	Arg	Gly	Gly	Gly	Gly	Gly	Pro	Ala	Tyr	Gly	Pro	Pro	Pro	Ser	145	150	155	160
Leu	His	Ala	Arg	Glu	Gly	Arg	Tyr	Glu	Arg	Arg	Leu	Asp	Gly	Ala	Ser	165	170	175	
Asp	Asn	Arg	Glu	Arg	Ala	Tyr	Glu	His	Ser	Ala	Tyr	Gly	His	His	Glu	180	185	190	
Arg	Gly	Thr	Gly	Gly	Phe	Asp	Arg	Thr	Arg	His	Tyr	Asp	Gln	Asp	Tyr	195	200	205	
Tyr	Arg	Asp	Pro	Arg	Glu	Arg	Thr	Leu	Gln	His	Gly	Leu	Tyr	Tyr	Ala	210	215	220	
Ser	Arg	Ser	Arg	Ser	Pro	Asn	Arg	Phe	Asp	Ala	His	Asp	Pro	Arg	Tyr	225	230	235	240
Glu	Pro	Arg	Ala	Arg	Glu	Gln	Phe	Thr	Leu	Pro	Ser	Val	Val	His	Arg	245	250	255	
Asp	Ile	Tyr	Arg	Asp	Asp	Ile	Thr	Arg	Glu	Val	Arg	Gly	Arg	Arg	Pro				



	260		265		270										
Glu	Arg	Asn	Tyr	Gln	His	Ser	Arg	Ser	Arg	Ser	Pro	His	Ser	Ser	Gln
	275						280					285			
Ser	Arg	Asn	Gln	Ser	Pro	Gln	Arg	Leu	Ala	Ser					
	290					295									

&lt;210&gt; 4169

&lt;211&gt; 4743

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4169

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120  
gagcccgcg gccccagccc ccgcctgcga cccgaggaga gcctggatcc gccaggcgcc  
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4743

<210> 4170  
<211> 900  
<212> PRT  
<213> Homo sapiens

<400> 4170  
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20 25 30  
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35 40 45  
Leu Arg Pro Glu Glu Ser Leu Asp Pro Pro Gly Ala Met Gln Glu Leu  
50 55 60  
Leu Gly Ala Leu Glu Pro Leu Pro Pro Ala Pro Gly Asp Thr Gly Val  
65 70 75 80  
Gly Pro Pro Asn Ser Glu Gly Lys Asp Pro Ala Gly Ala Tyr Arg Ser  
85 90 95  
Pro Ser Pro Gln Gly Thr Lys Ala Pro Arg Phe Val Pro Leu Thr Ser  
100 105 110  
Ile Cys Phe Pro Asp Ser Leu Leu Gln Asp Glu Glu Arg Ser Phe Phe  
115 120 125  
Pro Thr Met Glu Glu Met Phe Gly Gly Gly Ala Ala Asp Asp Tyr Gly  
130 135 140  
Lys Ala Gly Pro Pro Glu Asp Glu Gly Asp Pro Lys Ala Gly Ala Gly  
145 150 155 160  
Pro Pro Pro Gly Pro Pro Ala Tyr Asp Pro Tyr Gly Pro Tyr Cys Pro  
165 170 175  
Gly Arg Ala Ser Gly Ala Gly Pro Glu Thr Pro Gly Leu Gly Leu Asp  
180 185 190  
Pro Asn Lys Pro Pro Glu Leu Pro Ser Thr Val Asn Ala Glu Pro Leu  
195 200 205  
Gly Leu Ile Gln Ser Gly Pro His Gln Ala Ala Pro Pro Pro Pro Pro  
210 215 220  
Pro Pro Pro Pro Pro Pro Ala Pro Ala Ser Glu Pro Lys Gly Gly Leu  
225 230 235 240  
Thr Ser Pro Ile Phe Cys Ser Thr Lys Pro Lys Lys Leu Leu Lys Thr  
245 250 255  
Ser Ser Phe His Leu Leu Arg Arg Arg Asp Pro Pro Phe Gln Thr Pro  
260 265 270  
Lys Lys Leu Tyr Ala Gln Glu Tyr Glu Phe Glu Ala Asp Glu Asp Lys  
275 280 285  
Ala Asp Val Pro Ala Asp Ile Arg Leu Asn Pro Arg Arg Leu Pro Asp

290	295	300
Leu Val Ser Ser Cys Arg Ser Arg Pro Ala Leu Ser Pro Leu Gly Asp		
305	310	315
Ile Asp Phe Cys Leu Pro Asn Pro Gly Pro Asp Gly Pro Arg Arg Arg		320
	325	330
Gly Arg Lys Pro Thr Lys Ala Lys Arg Asp Gly Pro Pro Arg Pro Arg		335
	340	345
Gly Arg Pro Arg Ile Arg Pro Leu Glu Val Pro Thr Thr Ala Gly Pro		350
	355	360
Ala Ser Ala Ser Thr Pro Thr Asp Gly Ala Lys Lys Pro Arg Gly Arg		365
	370	375
Gly Arg Gly Arg Gly Arg Lys Ala Glu Glu Ala Gly Gly Thr Arg Leu		380
385	390	395
Glu Pro Leu Lys Pro Leu Lys Ile Lys Leu Ser Val Pro Lys Ala Gly		400
	405	410
Glu Gly Leu Gly Thr Ser Ser Gly Asp Ala Ile Ser Gly Thr Asp His		415
	420	425
Asn Ser Leu Asp Ser Ser Leu Thr Arg Glu Lys Ile Glu Ala Lys Ile		430
	435	440
Lys Glu Val Glu Glu Lys Gln Pro Glu Met Lys Ser Gly Phe Met Ala		445
	450	455
Ser Phe Leu Asp Phe Leu Lys Ser Gly Lys Arg His Pro Pro Leu Tyr		460
465	470	475
Gln Ala Gly Leu Thr Pro Pro Leu Ser Pro Pro Lys Ser Val Pro Pro		480
	485	490
Ser Val Pro Ala Arg Gly Leu Gln Pro Gln Pro Pro Ala Thr Pro Ala		495
	500	505
Val Pro His Pro Pro Pro Ser Gly Ala Phe Gly Leu Gly Gly Ala Leu		510
	515	520
Glu Ala Ala Glu Ser Glu Gly Leu Gly Leu Gly Cys Pro Ser Pro Cys		525
	530	535
Lys Arg Leu Asp Glu Glu Leu Lys Arg Asn Leu Glu Thr Leu Pro Ser		540
545	550	555
Phe Ser Ser Asp Glu Glu Asp Ser Val Ala Lys Asn Arg Asp Leu Gln		560
	565	570
Glu Ser Ile Ser Ser Ala Ile Ser Ala Leu Asp Asp Pro Pro Leu Ala		575
	580	585
Gly Pro Lys Asp Thr Ser Thr Pro Asp Gly Pro Pro Leu Ala Pro Ala		590
	595	600
Ala Ala Val Pro Gly Pro Pro Pro Leu Pro Gly Leu Pro Ser Ala Asn		605
	610	615
Ser Asn Gly Thr Pro Glu Pro Pro Leu Leu Glu Glu Lys Pro Pro Pro		620
625	630	635
Thr Pro Pro Pro Ala Pro Thr Pro Gln Pro Gln Pro Pro Pro Pro Pro		640
	645	650
Pro Pro Pro Gln Pro Ala Leu Pro Ser Pro Pro Pro Leu Val Ala Pro		655
	660	665
Thr Pro Ser Ser Pro Pro Pro Pro Pro Leu Pro Pro Pro Pro Pro Pro		670
	675	680
Ala Met Pro Ser Pro Pro Pro Pro Pro Pro Pro Ala Ala Ala Pro Leu		685
	690	695
Ala Ala Pro Pro Glu Glu Pro Ala Ala Pro Ser Pro Glu Asp Pro Glu		700
705	710	715
Leu Pro Asp Thr Arg Pro Leu His Leu Ala Lys Lys Gln Glu Thr Ala		720

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<212> DNA
<213> Homo sapiens
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720

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<213> Homo sapiens

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35 40 45  
Val Phe Ile Leu Pro Leu Asp Val Ser Thr Thr Ile Tyr Asn Arg Cys  
50 55 60  
Lys His Ala Ala Gln Ile Gln Ala Leu Leu Arg Ile Ala Thr Leu Gln  
65 70 75 80  
Asp Cys Ala Thr Ala Asn Pro Val Pro Ser Gln His Pro Cys Phe Lys  
85 90 95  
Pro Trp Ser Tyr Ile Pro Asp Gly Ile Met Pro Ile Phe Trp Arg Val  
100 105 110  
Val Tyr Trp Thr Ser Gln Phe Leu Thr Trp Ile Leu Leu Pro Phe Met  
115 120 125  
Gln Ser Tyr Ala Arg Ser Gly Gly Phe Ser Ile Thr Gly Lys Ile Lys  
130 135 140  
Thr Ala Leu Ile Glu Asn Ala Ile Tyr Tyr Gly Thr Tyr Leu Leu Ile  
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Phe Gly Ala Phe Leu Ile Tyr Val Ala Val Asn Pro His Leu His Leu  
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Glu Trp Asn Gln Leu Gln Thr Ile  
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180  
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240  
caaagtgcgc tagggcactg ggctcggcta aaggccatt gctatgctgc tgcgtgcagg  
300



catggcatct acaagatgga gactctttcc tgacacacga ccattactac atgctaaatg  
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 20 25 30  
 Gly Thr Pro Val Ser Lys Cys Ala Arg Ala Leu Gly Ser Ala Lys Gly  
 35 40 45  
 Pro Leu Leu Cys Cys Cys Val Gln Ala Trp His Leu Gln Asp Gly Asp  
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 <211> 2778  
 <212> DNA  
 <213> Homo sapiens

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&lt;210&gt; 4176

&lt;211&gt; 586

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4176

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			20					25					30		
Ala	Gly	Leu	Arg	Ala	Ala	Met	Gly	Pro	Gly	Ile	Ser	Arg	Met	Asn	Asp
		35					40					45			
Leu	Thr	Ile	Ile	Gln	Thr	Thr	Gln	Gly	Phe	Cys	Arg	Tyr	Leu	Glu	Lys
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Gln	Phe	Ser	Asp	Leu	Lys	Gln	Lys	Gly	Ile	Val	Ile	Ser	Phe	Asp	Ala
65				70					75					80	
Arg	Ala	His	Pro	Ser	Ser	Gly	Gly	Ser	Ser	Arg	Arg	Phe	Ala	Arg	Leu
			85					90						95	
Ala	Ala	Thr	Thr	Phe	Ile	Ser	Gln	Gly	Ile	Pro	Val	Tyr	Leu	Phe	Ser
			100					105					110		
Asp	Ile	Thr	Pro	Thr	Pro	Phe	Val	Pro	Phe	Thr	Val	Ser	His	Leu	Lys
	115						120					125			
Leu	Cys	Ala	Gly	Ile	Met	Ile	Thr	Ala	Ser	His	Asn	Pro	Lys	Gln	Asp
	130						135				140				
Asn	Gly	Tyr	Lys	Val	Tyr	Trp	Asp	Asn	Gly	Ala	Gln	Ile	Ile	Ser	Pro
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His	Asp	Lys	Gly	Ile	Ser	Gln	Ala	Ile	Glu	Glu	Asn	Leu	Glu	Pro	Trp
			165					170						175	
Pro	Gln	Ala	Trp	Asp	Asp	Ser	Leu	Ile	Asp	Ser	Ser	Pro	Leu	Leu	His
		180						185					190		
Asn	Pro	Ser	Ala	Ser	Ile	Asn	Asn	Asp	Tyr	Phe	Glu	Asp	Leu	Lys	Lys
	195					200					205				
Tyr	Cys	Phe	His	Arg	Ser	Val	Asn	Arg	Glu	Thr	Lys	Val	Lys	Phe	Val
	210					215					220				
His	Thr	Ser	Val	His	Gly	Val	Gly	His	Ser	Phe	Val	Gln	Ser	Ala	Phe
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Lys	Ala	Phe	Xaa	Pro	Cys	Ser	Ser	Xaa	Glu	Ala	Val	Pro	Glu	Gln	Lys

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<211> 4763
<212> DNA
<213> Homo sapiens
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120
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&lt;210&gt; 4178

&lt;211&gt; 398

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens



&lt;400&gt; 4178

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      20      25      30
Ala Ala His Leu Asp Asn Gln Val Pro Val Glu Ser Pro Arg Ala Ile
      35      40      45
Ser Arg Thr Asn Glu Asn Asp Pro Ala Lys His Gly Asp Gln His Glu
      50      55      60
Gly Gln His Tyr Asn Ile Ser Pro Gln Asp Leu Glu Thr Val Phe Pro
65      70      75      80
His Gly Leu Pro Pro Arg Phe Val Met Gln Val Lys Thr Phe Ser Glu
      85      90      95
Ala Cys Leu Met Val Arg Lys Pro Ala Leu Glu Leu Leu His Tyr Leu
      100     105     110
Lys Asn Thr Ser Phe Ala Tyr Pro Ala Ile Arg Tyr Leu Leu Tyr Gly
      115     120     125
Glu Lys Gly Thr Gly Lys Thr Leu Ser Leu Cys His Val Phe His Phe
      130     135     140
Cys Ala Lys Gln Asp Trp Leu Ile Leu His Ile Pro Asp Ala His Leu
145     150     155     160
Trp Val Lys Asn Cys Arg Asp Leu Leu Gln Ser Ser Tyr Asn Lys Gln
      165     170     175
Arg Phe Asp Gln Pro Leu Glu Ala Ser Thr Trp Leu Lys Asn Phe Lys
      180     185     190
Thr Thr Asn Glu Arg Phe Leu Asn Gln Ile Lys Val Gln Glu Lys Tyr
      195     200     205
Val Trp Asn Lys Arg Glu Leu Thr Glu Lys Gly Ser Pro Leu Gly Glu
      210     215     220
Val Val Glu Gln Gly Ile Thr Arg Val Arg Asn Ala Thr Asp Ala Val
225     230     235     240
Gly Ile Val Leu Lys Glu Leu Lys Arg Gln Ser Ser Leu Gly Met Phe
      245     250     255
His Leu Leu Val Ala Val Asp Gly Ile Asn Ala Leu Trp Gly Arg Thr
      260     265     270
Thr Leu Lys Arg Glu Asp Lys Ser Pro Ile Ala Pro Glu Glu Leu Ala
      275     280     285
Leu Val His Asn Leu Arg Lys Met Met Lys Asn Asp Trp His Gly Gly
      290     295     300
Ala Ile Val Ser Ala Leu Ser Gln Thr Gly Ser Leu Phe Lys Pro Arg
305     310     315     320
Lys Ala Tyr Leu Pro Gln Glu Leu Leu Gly Lys Glu Gly Phe Asp Ala
      325     330     335
Leu Asp Pro Phe Ile Pro Ile Leu Val Ser Asn Tyr Asn Pro Lys Glu
      340     345     350
Phe Glu Ser Cys Ile Gln Tyr Tyr Leu Glu Asn Asn Trp Leu Gln His
      355     360     365
Glu Lys Ala Pro Thr Glu Glu Gly Lys Lys Glu Leu Leu Phe Leu Ser
      370     375     380
Asn Ala Asn Pro Ser Leu Leu Glu Arg His Cys Ala Tyr Leu
385     390     395

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&lt;210&gt; 4179

&lt;211&gt; 2208

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4179

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180  
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&lt;210&gt; 4180

&lt;211&gt; 257

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4180

Met	Leu	Leu	Thr	Leu	Ala	Gly	Gly	Ala	Leu	Phe	Phe	Pro	Gly	Leu	Phe
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Ala	Leu	Cys	Thr	Trp	Ala	Leu	Arg	Arg	Ser	Gln	Pro	Gly	Trp	Ser	Arg
			20					25					30		
Thr	Asp	Cys	Val	Met	Ile	Ser	Thr	Arg	Leu	Val	Ser	Ser	Val	His	Ala
		35					40					45			
Val	Leu	Ala	Thr	Gly	Ser	Gly	Ile	Val	Ile	Ile	Arg	Ser	Cys	Asp	Asp
	50					55					60				
Val	Ile	Thr	Gly	Arg	His	Trp	Leu	Ala	Arg	Glu	Tyr	Val	Trp	Phe	Leu
65					70					75				80	
Ile	Pro	Tyr	Met	Ile	Tyr	Asp	Ser	Tyr	Ala	Met	Tyr	Leu	Cys	Glu	Trp
			85					90					95		
Cys	Arg	Thr	Arg	Asp	Gln	Asn	Arg	Ala	Pro	Ser	Leu	Thr	Leu	Arg	Asn
			100					105					110		
Phe	Leu	Ser	Arg	Asn	Arg	Leu	Met	Ile	Thr	His	His	Ala	Val	Ile	Leu
		115					120					125			
Phe	Val	Leu	Val	Pro	Val	Ala	Gln	Arg	Leu	Arg	Gly	Asp	Leu	Gly	Asp
	130					135					140				
Phe	Phe	Val	Gly	Cys	Ile	Phe	Thr	Ala	Glu	Leu	Ser	Thr	Pro	Phe	Val
145					150					155				160	
Ser	Leu	Gly	Arg	Val	Leu	Ile	Gln	Leu	Lys	Gln	Gln	His	Thr	Leu	Leu
			165					170						175	
Tyr	Lys	Val	Asn	Gly	Ile	Leu	Thr	Leu	Ala	Thr	Phe	Leu	Ser	Cys	Arg

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<400> 4182
His Pro Ala Gly Ile Glu Phe Ser Leu Cys Leu Leu Phe Ala Lys Leu
  1             5             10             15
Val Ser Tyr Thr Phe Leu Tyr Trp Leu Pro Leu Tyr Ile Ala Asn Val
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Val	Gly	Gly	Ile	Ile	Gly	Gly	Ile	Val	Ala	Gly	Leu	Val	Ser	Asp	Tyr
	50					55					60				
Thr	Asn	Gly	Arg	Ala	Thr	Thr	Cys	Cys	Val	Met	Leu	Ile	Leu	Ala	Ala
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Pro	Met	Met	Phe	Leu	Tyr	Asn	Tyr	Ile	Gly	Gln	Asp	Gly	Ile	Ala	Ser
			85						90					95	
Ser	Ile	Val	Met	Leu	Ile	Ile	Cys	Gly	Gly	Leu	Val	Asn	Gly	Pro	Tyr
		100						105				110			
Ala	Xaa	Ile	Thr	Thr	Ala	Val	Ser	Ala	Asp	Leu	Gly	Thr	His	Lys	Ser
	115							120				125			
Leu	Lys	Gly	Asn	Ala	Lys	Ala	Leu	Ser	Thr	Val	Thr	Ala	Ile	Ile	Asp
	130					135					140				
Gly	Thr	Gly	Ser	Ile	Gly	Ala	Ala	Leu	Gly	Pro	Leu	Leu	Ala	Gly	Leu
145					150					155				160	
Ile	Ser	Pro	Thr	Gly	Trp	Asn	Asn	Val	Phe	Tyr	Met	Leu	Ile	Ser	Ala
			165					170				175			
Asp	Val	Leu	Ala	Cys	Leu	Leu	Leu	Cys	Arg	Leu	Val	Tyr	Lys	Glu	Ile
		180						185				190			

&lt;210&gt; 4183

&lt;211&gt; 1129

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4183

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<210> 4184

<211> 374

<212> PRT

<213> Homo sapiens

<400> 4184

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		20						25						30	
Arg	Phe	Met	Pro	Gln	Gln	Asn	Ser	Pro	Val	Pro	Ser	Pro	Tyr	Ala	Pro
		35					40						45		
Gln	Ser	Pro	Ala	Gly	Tyr	Met	Pro	Tyr	Ser	His	Pro	Ser	Ser	Tyr	Thr
	50					55					60				
Thr	His	Pro	Gln	Met	Gln	Gln	Ala	Ser	Val	Ser	Ser	Pro	Ile	Val	Ala
65					70					75					80
Gly	Gly	Leu	Arg	Asn	Ile	His	Asp	Asn	Lys	Val	Ser	Gly	Pro	Leu	Ser
			85					90						95	
Gly	Asn	Ser	Ala	Asn	His	His	Ala	Asp	Asn	Pro	Arg	His	Gly	Ser	Ser
			100					105					110		
Glu	Asp	Tyr	Leu	His	Met	Val	His	Arg	Leu	Ser	Ser	Asp	Asp	Gly	Asp
	115						120					125			
Ser	Ser	Thr	Met	Arg	Asn	Ala	Ala	Ser	Phe	Pro	Leu	Arg	Ser	Pro	Gln
	130					135					140				
Pro	Val	Cys	Ser	Pro	Ala	Gly	Ser	Glu	Gly	Thr	Pro	Lys	Gly	Ser	Arg
145					150					155					160
Pro	Pro	Leu	Ile	Leu	Gln	Ser	Gln	Ser	Leu	Pro	Cys	Ser	Ser	Pro	Arg
			165					170						175	
Asp	Val	Pro	Pro	Asp	Ile	Leu	Leu	Asp	Ser	Pro	Glu	Arg	Lys	Gln	Lys
		180						185					190		
Lys	Gln	Lys	Lys	Met	Lys	Leu	Gly	Lys	Asp	Glu	Lys	Glu	Gln	Ser	Glu
	195						200					205			
Lys	Ala	Ala	Met	Tyr	Asp	Ile	Ile	Ser	Ser	Pro	Ser	Lys	Asp	Ser	Thr
	210					215					220				
Lys	Leu	Thr	Leu	Arg	Leu	Ser	Arg	Val	Arg	Ser	Ser	Asp	Met	Asp	Gln
225					230					235					240
Gln	Glu	Asp	Met	Leu	Ser	Gly	Met	Glu	Asn	Ser	Asn	Val	Ser	Glu	Asn
			245					250						255	
Asp	Ile	Pro	Phe	Asn	Val	Gln	Tyr	Gln	Gly	Gln	Thr	Ser	Lys	Thr	Pro
		260						265					270		
Ile	Thr	Pro	Gln	Asp	Val	Asn	Arg	Pro	Leu	Asn	Ala	Ala	Gln	Cys	Leu



275	280	285
Ser Gln Gln Glu Gln Thr	Ala Phe Leu Pro Ala	Asn Gln Val Pro Val
290	295	300
Leu Gln Gln Asn Thr Ser	Val Ala Thr Lys Gln	Pro Gln Thr Ser Val
305	310	315
Val Gln Asn Gln Gln Gln	Ile Ser Gln Gln Gly	Pro Ile Tyr Asp Glu
325	330	335
Val Glu Leu Asp Ala Leu	Ala Glu Ile Glu Arg	Ile Glu Arg Glu Ser
340	345	350
Ala Ile Glu Arg Glu Arg	Phe Ser Lys Glu Val	Gln Asp Lys Asp Lys
355	360	365
Pro Leu Lys Lys Lys Lys		
370		

&lt;210&gt; 4185

&lt;211&gt; 1481

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4185

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1020

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<210> 4186

<211> 385

<212> PRT

<213> Homo sapiens

<400> 4186

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			20					25					30		
Gln	Gln	Ala	Glu	Lys	Ile	Leu	Lys	Ser	Met	Asp	Lys	Asn	Gly	Thr	Met
		35					40					45			
Thr	Ile	Asp	Trp	Asn	Glu	Trp	Arg	Asp	Tyr	His	Leu	Leu	His	Pro	Val
	50				55					60					
Glu	Asn	Ile	Pro	Glu	Ile	Ile	Leu	Tyr	Trp	Lys	His	Ser	Thr	Ile	Phe
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Asp	Val	Gly	Glu	Asn	Leu	Thr	Val	Pro	Asp	Glu	Phe	Thr	Val	Glu	Glu
			85					90					95		
Arg	Gln	Thr	Gly	Met	Trp	Trp	Arg	His	Leu	Val	Ala	Gly	Gly	Gly	Ala
		100					105						110		
Gly	Ala	Val	Ser	Arg	Thr	Cys	Thr	Ala	Pro	Leu	Asp	Arg	Leu	Lys	Val
	115					120					125				
Leu	Met	Gln	Val	His	Ala	Ser	Arg	Ser	Asn	Asn	Met	Gly	Ile	Val	Gly
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Gly	Phe	Thr	Gln	Met	Ile	Arg	Glu	Gly	Gly	Ala	Arg	Ser	Leu	Trp	Arg
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Gly	Asn	Gly	Ile	Asn	Val	Leu	Lys	Ile	Ala	Pro	Glu	Ser	Ala	Ile	Lys
			165					170					175		
Phe	Met	Ala	Tyr	Glu	Gln	Ile	Lys	Arg	Leu	Val	Gly	Ser	Asp	Gln	Glu
	180						185						190		
Thr	Leu	Arg	Ile	His	Glu	Arg	Leu	Val	Ala	Gly	Ser	Leu	Ala	Gly	Ala
	195						200					205			
Ile	Ala	Gln	Ser	Ser	Ile	Tyr	Pro	Met	Glu	Val	Leu	Lys	Thr	Arg	Met
	210				215						220				
Ala	Leu	Arg	Lys	Thr	Gly	Gln	Tyr	Ser	Gly	Met	Leu	Asp	Cys	Ala	Arg
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Arg	Ile	Leu	Ala	Arg	Glu	Gly	Val	Ala	Ala	Phe	Tyr	Lys	Gly	Tyr	Val

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<210> 4188

<211> 272

<212> PRT

<213> Homo sapiens

<400> 4188

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Tyr	Asn	Tyr	Gly	Ser	Phe	Glu	Asn	Val	Ser	Gly	Ser	Thr	Asp	Gly	Leu
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Val	Asp	Ser	Ala	Gly	Thr	Gly	Asp	Leu	Ser	Tyr	Gly	Tyr	Gln	Gly	Arg
	50					55					60				
Ser	Phe	Glu	Pro	Val	Gly	Thr	Arg	Pro	Arg	Val	Asp	Ser	Met	Ser	Ser
65				70						75				80	
Val	Glu	Glu	Asp	Asp	Tyr	Asp	Thr	Leu	Thr	Asp	Ile	Asp	Ser	Asp	Lys
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<210> 4189

<211> 1570

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4189

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 <212> PRT  
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&lt;210&gt; 4191

&lt;211&gt; 1661

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4191

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&lt;210&gt; 4192

&lt;211&gt; 517

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4192

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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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 <213> Homo sapiens

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&lt;210&gt; 4195

&lt;211&gt; 1200

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4195

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&lt;210&gt; 4196

&lt;211&gt; 318

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4196

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Phe	Ala	Thr	Leu	Ala	Leu	Ile	Leu	Leu	Val	Leu	Leu	Glu	Ala	Leu	Ala
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Gln	Ala	Asp	Thr	Gln	Lys	Met	Val	Glu	Ala	Gln	Arg	Gly	Val	Gly	Pro
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<213> Homo sapiens

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<211> 148  
<212> PRT  
<213> Homo sapiens

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&lt;210&gt; 4199

&lt;211&gt; 1769

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4199

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&lt;210&gt; 4200

&lt;211&gt; 186

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4200

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			20					25					30		
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Met	Ile	Pro	Thr	Val	Gly	Phe	Asn	Met	Arg	Lys	Val	Thr	Lys	Gly	Asn
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Val	Thr	Ile	Lys	Ile	Trp	Asp	Ile	Gly	Gly	Gln	Pro	Arg	Phe	Arg	Ser
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Met	Trp	Glu	Arg	Tyr	Cys	Arg	Gly	Val	Asn	Ala	Ile	Val	Tyr	Met	Ile
			85					90						95	
Asp	Ala	Ala	Asp	Arg	Glu	Lys	Ile	Glu	Ala	Ser	Arg	Asn	Glu	Leu	His
			100					105					110		
Asn	Leu	Leu	Asp	Lys	Pro	Gln	Leu	Gln	Gly	Ile	Pro	Val	Leu	Val	Leu
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Gly	Asn	Lys	Arg	Asp	Leu	Pro	Gly	Ala	Leu	Asp	Glu	Lys	Glu	Leu	Ile
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Glu	Lys	Met	Asn	Leu	Ser	Ala	Ile	Gln	Asp	Arg	Glu	Ile	Cys	Cys	Tyr
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Ser	Ile	Ser	Cys	Lys	Glu	Lys	Asp	Asn	Ile	Asp	Ile	Thr	Leu	Gln	Trp
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 <212> DNA  
 <213> Homo sapiens

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 <212> PRT  
 <213> Homo sapiens

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 Ile Leu Gly Phe Thr Asn Phe Ile Ala His Ala Ile Arg His Cys Tyr  
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 Gln Pro Val Gly Gly Gly Gly Ser Pro Ser Asp Phe Tyr Leu Cys Ser  
 50 55 60  
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Thr	Val	Asp	Arg	Phe	Gly	Arg	Arg	Gly	Ile	Leu	Leu	Leu	Ser	Met	Thr
				85					90					95	
Leu	Thr	Gly	Ile	Ala	Ser	Leu	Val	Leu	Leu	Gly	Leu	Trp	Asp	Tyr	Leu
			100					105					110		
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Gln	Ala	Ala	Ala	Ile	Leu	Ser	Thr	Leu	Leu	Ala	Ala	Glu	Val	Ile	Pro
		130				135					140				
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&lt;211&gt; 1368

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4203

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<211> 80

<212> PRT

<213> Homo sapiens

<400> 4204

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			20					25					30		
Tyr	Thr	Val	Val	Pro	Phe	Val	Leu	Ser	Ile	Lys	Pro	Ser	Leu	Thr	
		35					40				45				
Phe	Tyr	Ser	Ser	Trp	Tyr	Tyr	Cys	Leu	His	Ile	Leu	Gly	Ile	Leu	Val
	50					55				60					
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<210> 4205

<211> 6523

<212> DNA

<213> Homo sapiens

<400> 4205

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